excursions in exhaust gas temperatures as thermal conditions of after-treatment and exhaust stream are increased in order to initiate soot oxidation on the DPF substrate. Exhaust gas temperatures were observed to increase from typical levels throughout the route of ~320°C to ~560°C during the DPF regeneration events. It has to be noted that temperatures depicted in Figure 4.51 and Figure 4.52 were measured at post SCR location by an on-board temperature sensor, acquired via ECU CAN interrogation.

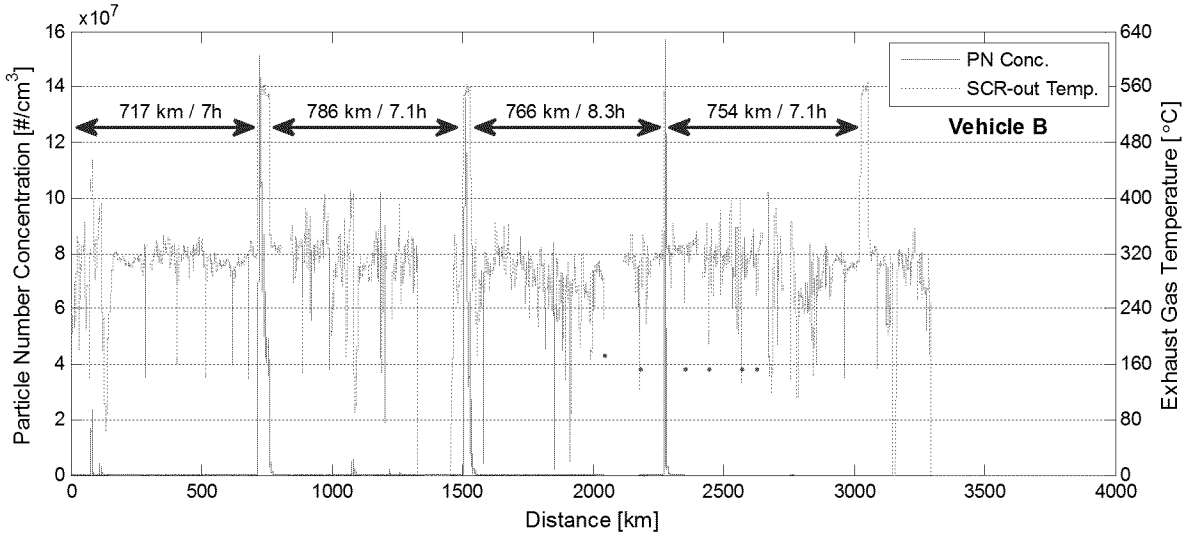


Figure 4.51: Particle number concentration and exhaust gas temperature at SCR outlet location of test vehicle over cross-multi-state driving route; Note: PN concentration spikes indicate DPF regeneration events

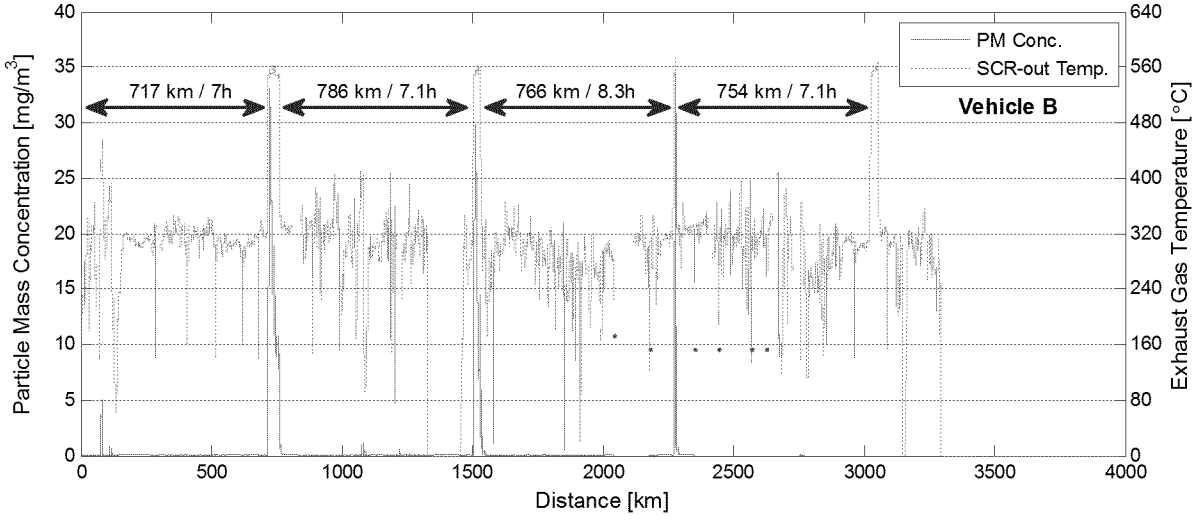


Figure 4.52: Particle mass concentration and exhaust gas temperature at SCR outlet location of test vehicle over cross-multi-state driving route; Note: PN concentration spikes indicate DPF regeneration events

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Even though four distinct exhaust gas temperature excursions can be noticed from Figure 4.51, thus indicating four DPF regeneration events throughout the entire route, only three particulate number concentration spikes are observed. This is due to the fact that the real-time particle sensor was not operational after ~2600km as the electrical air compressor providing pressurized air to the sensor had failed. However, even though lacking actual particle measurements, but solely based on the preceding data it can be concluded with the necessary confidence that the temperature excursion around 3023km is indicative of a DPF regeneration event.

It is interesting to notice from Figure 4.51 that DPF regeneration events are nearly equally spaced both on a spatial (i.e. distance traveled) and temporal (i.e. duration between event) basis as can be seen from Table 4.10. On average the vehicle traveled approximately 756km ±29km (±1σ) between individual regeneration events which was observed to correspond to ~7.07hours ±0.06hours (±1σ, not including third event) on a temporal basis. Even though the distance traveled between events 2 and 3 is of similar length than for other events, the time required was observed to be ~17% longer (7.07hours vs. 8.3hours). A possible explanation for this difference is that the route between regeneration events 2 and 3 included low vehicle speed urban/suburban driving in and around Seattle, WA, leading to increased travel time to accumulate ~756km. Overall, these results ultimately lead to conclude that DPF regeneration intervals are predominantly distance based which agrees with descriptions given for after-treatment control strategies for Vehicle A in [31] (see from Figure 12 in [31]) which are most likely similar to *Vehicle B* as well as the same engine and DPF configurations are used in both vehicles. Furthermore, the observed average duration of a DPF regeneration event was 15min ±6min (±1σ) as seen from Table 4.10, thereby in agreement with system descriptions provided in [31].

Table 4.10: Distance and time based DPF regeneration frequencies and duration for Vehicle B over cross-multi state driving route

Event [#]	Distance to event [km]	Distance based f_{regen} [km]	Time to event [hr]	Time based f_{regen} [hr]	Duration [min]
1	717	*717*	7.0	*7.0*	22.4
2	1,503	*786*	14.1	*7.1*	15.2
3	2,269	*766*	22.3	*8.3*	7.5
4	3,023	*754*	29.5	*7.1*	15.8

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5 CONCLUSIONS

Three light-duty diesel vehicles of European make, equipped with two different NO_x abatement technologies, namely lean-NO_x trap and urea-based selective catalytic reduction system, and certified to US-EPA Tier2-Bin5 and CARB LEV-II ULEV (CA) emissions standards were operated over a variety of pre-defined test routes exhibiting diverse driving conditions pertinent to major US population centers located in the state of California. Additionally, one vehicle, specifically *Vehicle B*, was driven over an extended distance of nearly 4000km predominantly composed of highway driving conditions between California and Washington State. Gaseous emissions of NO_x, CO, THC and CO_2 were measured using the OBS-2200 PEMS from Horiba Ltd., while particulate number and mass concentrations were inferred from real-time particle charge measurements employing a Pegasor particle sensor.

In summary, real-world NO_x emissions were found to exceed the US-EPA Tier2-Bin5 standard (at full useful life) by a factor of 15 to 35 for the LNT equipped *Vehicle A*, by a factor of 5 to 20 for the urea-SCR fitted *Vehicle B* (same engine as *Vehicle A*) and at or below the standard for *Vehicle C* with exception of rural-up/downhill driving conditions, over five pre-defined test routes. Generally, NO_x emissions were observed to be highest for rural-up/downhill and lowest for high-speed highway driving conditions with relatively flat terrain. Interestingly, NO_x emissions factors for *Vehicles A* and *B* were below the US-EPA Tier2-Bin5 standard for the weighted average over the FTP-75 cycle during chassis dynamometer testing at CARB's El Monte facility, with 0.022g/km ±0.006g/km (±1σ, 2 repeats) and 0.016g/km ±0.002g/km (±1σ, 3 repeats), respectively. Additionally, increased variability between consecutive test runs was observed for *Vehicle A* coinciding with DPF regeneration events, leading to an increase in NO_x emissions by 97% (0.41 g/km to 0.81g/km), 19% (1.38g/km to 1.63g/km), and 38% (1.24g/km to 1.72g/km) for Routes 1, 3, and 4, respectively, between test runs with and without DPF regeneration events. This was speculated to be due to an extended duration of lean exhaust conditions and a lack of frequent enrichment of the exhaust gas ($\lambda < 1$) while DPF regeneration was ongoing, leading to an inhibition of necessary LNT regeneration (D_eNOx), and thus, causing the NO_x storage catalyst to become saturated with NO_x emissions that ultimately started to break through. The probability of this explanation is additionally supported by a detailed description of the after-treatment control strategy for *Vehicle A* presented elsewhere [31].

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NO_x emissions of *Vehicle B* over the cross-multi state driving route, comprising predominantly highway driving, were observed to be on average 0.26g/km ±0.21g/km (±1σ) or approximately 6 times exceeding the US-EPA Tier2-Bin5 standard. However, most interestingly NO_x emissions were found to be below the regulatory standard for portions of the route characterized by low or negligible changes in altitude (i.e. near zero road grade), and with the vehicle operated in cruise-control mode at approximately 120km/h while traveling northbound on Interstate 5 through the San Joaquin Valley (see route portions 3 through 6 in Figure 4.15).

In general, CO and THC emissions were observed to be well below the regulatory level for all three test vehicles and driving conditions, with exception of Routes 1 and 2 for *Vehicle A* where THC emissions were seen to exceed the regulatory level by a small margin (< factor 1.25). Highest THC emissions for *Vehicle A* coincided with lowest NO_x emissions however, no conclusive explanation can be presented herein for why this behavior was observed.

As expected, highway driving showed lowest CO_2, whereas urban/suburban driving conditions lead to highest CO_2 emissions factors for all vehicles. Since both *Vehicles A* and *B* were equipped with the same engine and similar test weights (i.e. 1855kg vs. 1884kg), comparable CO_2 consumption patterns were observed in agreement with results obtained during chassis dynamometer testing over the NEDC for urban/suburban and highway driving portions. It has to be noted that the equivalent vehicle test weight during chassis dynamometer testing was 1701kg for both *Vehicles A* and *B*, or ~8% lower compared to vehicle weights during on-road PEMS testing. Finally, CO_2 emissions factors for *Vehicle C* were observed to exceed the EPA/NHTSA CO_2/CAFE standard for the applicable LDT4 vehicle category with an actual vehicle test weight of 2903kg. The equivalent test weight for CO_2 emissions evaluation as per EPA procedure is 2495kg, or ~14% lower compared to the actual vehicle weight during on-road PEMS testing. Average fuel economy for highway driving with *Vehicles A* and *B* was 45.3 mpg ±8.6mpg (±σ1) and 43.7mpg ±5.7mpg (±σ1), respectively, and 27.3 mpg (no repetition) for *Vehicle C* which is ~39% lower compared to *Vehicles A* and *B*. On the other hand, urban/suburban driving results in average fuel economies of 30.0mpg ±2.9mpg (±σ1) and 26.6 mpg ±1.4mpg (±σ1) for *Vehicles A* and *B*, respectively, and 18.5mpg ±4.0mpg (±σ1) for *Vehicle C* which is 35% lower compared to *Vehicles A* and *B*. Overall, urban/suburban driving leads to a 32-39% reduction in fuel economy over highway driving.

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Particulate matter mass emissions, inferred from PPS measurements, were observed below the US-EPA Tier2-Bin5 standard for *Vehicles A* and *B*. On the other hand, particulate number emissions were found to exceed the Euro 5b/b+ PN standard during DPF regeneration events increasing by 2 to 3 orders of magnitude over emissions levels measured during none-regeneration events. It is noted that PN is not regulated in the United States. During the multi-state driving route, DPF regeneration frequency for *Vehicle B* was established to be predominantly based on distance traveled, occurring after every 756km ±29km (±1σ), corresponding to ~7.07hours ±0.06hours for highway driving conditions.

It is noted that only three vehicles were tested as part of this measurement campaign with each vehicle being a different after-treatment technology or vehicle manufacturer; conclusions drawn from the data presented herein are confined to these three vehicles. The limited data set does not necessarily permit drawing more generalized conclusions for a specific vehicle category or after-treatment technology.

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7 APPENDIX

7.1 Exhaust Emissions Calculations with Horiba OBS-2200

7.1.1 Time alignment of real-time emissions concentrations

The individual emissions concentrations are shifted to account for transport delays from the sampling plane (reference point) to the analyzer cells through the heated transfer line, heated filter and internal plumbing of the OBS. This is done in order to time-align the concentration values with the respective exhaust flow rates for calculation of time-specific mass emissions rates. Exhaust concentration alignment is automatically performed by the OBS software, hence; the emissions concentrations reported in the data sets (csv-files) are already time-aligned. Transport delay times (T_{50}) are calculated from spike-recovery tests during the calibration and initial setup of the OBS instrument. The csv-files report the delay times in column '*E*' in the file header.

7.1.2 Drift correction of real-time emissions concentrations

Drift corrections of the emissions concentrations are performed in order to account for possible analyzer drift over the measurement period. Prior to data collection over a test route, '*pre-zero*' and '*pre-span*' adjustments are performed for each analyzer. Upon completion of a test route, '*post-zero*' and '*post-span*' values are automatically collected by the OBS software for each analyzer. If the duration of a test route exceeds one hour (i.e. 3600 seconds), the OBS will automatically interrupt data collection for a period of 30 seconds to perform a '*post-zero*' and '*post-span*' check as well as make zero/span adjustments for each analyzer before continuing with data collection. Zero-drift and span-drift values are reported in columns '*I*' and '*J*', respectively of the csv-file. Using these values, the OBS software automatically performs a drift correction of the real-time emissions concentration values upon completion of data collection (e.g. end of test route) using Equation (1).

7.1.3 Averaging Window Method (AWM)

In this method emission rates are integrated along with one of the listed criteria from time $t = 0.0\ sec$ until the chosen criteria has reached a target value. The target values are normally derived from standardized test cycles used in certifying engine families in test cell. The time

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interval between $t_{start} = 0.0\ sec$ to $t_{end} = x.x\ sec$ where the integrated value of the chosen criteria is equal to its target is called a window, and for a moving window method the process is repeated with a new starting time being $t_{start} = 0.0 + 1.0\ sec$ until a new window is achieved. Emissions rates of regulated pollutants are integrated for the above criteria windows, and have to meet the set in-use emissions standards. The criteria windows are valid only if the average engine power for each window is greater than or equal to 20% of maximum engine power. Similarly for an in-use test to be valid there should be at least 50% of criteria windows should be valid. If there are no 50% valid criteria windows in an in-use test then the window validity condition is reduced as low as 15% of maximum engine power in increments of 1% of average power.

7.2 Particle Number Measurement with European PMP Method

Streamlined with the introduction of PN limits (i.e. Euro 5b/b+ [4]), the European Union adopted a new methodology aimed at standardizing the measurement of total particle number concentrations by only counting solid particles having a diameter between 23nm and 2.5µm and that are thermally treated in order to reduce the volatile fraction, thus reducing measurement artifacts and variability [27]. This method has been previously developed under the Particle Measurement Program (PMP) of the United Nation's Economic Commissions for Europe - Group of Experts on Pollution and Energy (UN-ECE-GRPE) [34, 35, and 36] leading to the following operational definition of particle numbers: '*measurement of solid particles having a diameter between 23nm and 2.5µm and are of sufficiently low volatility to survive a residence time of 0.2sec at 300°C*' [37].

The sampling system comprises a volatile particle remover (VPR) and an ultrafine particle counter optimized for a 50% counting efficiency for 23nm size particles. The VPR is designed to remove the volatile and semi-volatile fractions in the exhaust sample, thereby aiming at suppressing particle nucleation and the formation of artifacts in the sample stream. A first stage hot dilution (at 150 to 400°C and dilution ratio of 10) is used to reduce particle concentration in the sample before being directed into the evaporation tube (operated at 300 to 400°C) where the volatile and semi-volatile components are being transferred to a gaseous state. It follows a second cold dilution stage (dilution ratio between 10 to 15) to i) rapidly lowering the partial pressures of the gaseous components aimed at preventing their re-condensation, and ii) lowering

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the sample temperature to below 35°C prior to entering the particle counting device. The Pegasor particle sensor for example has the advantage of not having a very limited range requirement for sample inlet temperatures (up to ~800°C), thus allowing for direct measurement of raw exhaust gases and thereby ultimately reducing the magnitude of size dependent particle losses as occurring in the VPR.

However, the PMP approach for particle number measurements has come under scrutiny as recent studies have on one hand observed significant semi-volatile particles downstream the VPR [38, 39], and on the other hand measured increased concentrations of particles below the size of 23nm being emitted from DPF equipped vehicles. These ultrafine particles are believed to comprise sulfuric acid and assumed to be emitted from catalytic oxidation of sulfur from lubrication oil [40, 41, and 42]. Johnson et al. [37] evaluated the European PMP methodology during on-road vehicle testing and observed a significant portion of particles in the size range below 20nm even though the sample stream was thermally treated according to PMP requirements, thus questioning the applicability of the 23nm lower cut-point for particle measurements, as mandated by the European PMP regulation.

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7.3 ULSD Fuel Analysis for Vehicles A and B

SGS HERGUTH LABORATORIES

Certificate of Analysis
Lab Number V7012631A

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The International Council
on Clean Transportation
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03/12/13

Page 1

Client Code : THEICF Sample Date : 02/25/13 P.O. Number : POSTED CASH
Herguth ID : LABV7012631
Description : Commercial Grade Diesel Fuel
Oil Type : Diesel Fuel (GN_130)
Unit Type : Diesel Fuel (GN_DF001)

Test Performed	Proc-Rev	Result
Sulfur by Microcoulometry ASTM D3120	3120-3.1	5 mg/kg
Density @ 15C ASTM D4052	4052-1.7	0.8355 g/mL
Biodiesel Blend as FAME by FTIR HL-1141A	1141A-1.1	0.32 vol. %
Aromatic Content & PAH by SFC ASTM D5186	5186-1.0	
Mono-Aromatics ASTM D5186		13.9 % wt
Polynuclear Aromatic Hydrocarbons, PAH ASTM D5186		1.7 % wt
Total Aromatics ASTM D5186		15.6 % wt
Ultimate Analysis	5291-1.0	
Carbon ASTM D5291		86.16 mass %
Hydrogen ASTM D5291		13.67 mass %

REVISED REPORT supersedes lab # V7012631 and includes additional test results.
Data is reported per client specified testing request.
Fourier Transform Infrared Analysis (FTIR) of the fuel sample submitted shows the percent of Fatty Acid Methyl Ester (FAME) component in the ~1750 cm-1 wavenumber region. FAME is the major indicator for Biodiesel. The FTIR was calibrated based on standards prepared by blending Diesel with B100 Soy Biodiesel.
Aromatic Content & PAH by SFC and Ultimate Analysis was subbed out.

Respectfully Submitted,
SGS Herguth Laboratories, Inc.

cc: Francisco Posada Sanchez

Bobby R Licu, Evaluations Manager

These results are submitted pursuant to our current Terms, Conditions and Limitations and Laboratory Pricing Policy.
No responsibility or liability is assumed for the manner in which these results are used or interpreted.
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OFF-CYCLE LIGHT-DUTY DIESEL VEHICLE EMISSIONS UNDER REAL-WORLD DRIVING CONDITIONS

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Francisco Posada, Vicente Franco, John German, Anup Bandivadekar (*ICCT*)

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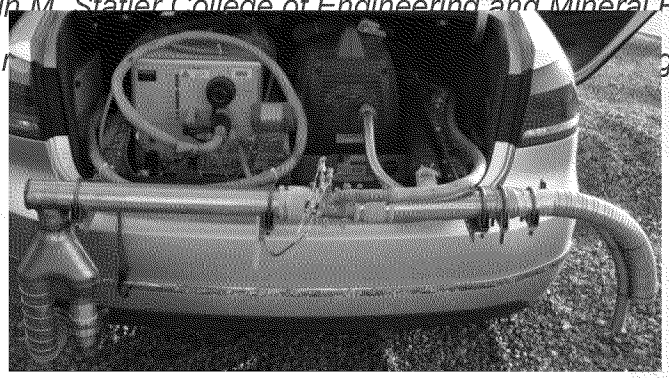
CAFEE

Center for Alternative Fuels, Engines, and Emissions

West Virginia University

Benjamin M. Statler College of Engineering and Mineral Resources

Depar[illegible]g (MAE)



California Environmental Protection Agency
AIR RESOURCES BOARD

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THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

VW FOIA, EPA 06/20/2017 2017-FFP_012356

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BACKGROUND AND MOTIVATION

- Increased ***off-cycle NO_x emissions*** identified from light-duty diesel vehicles in Europe
  - exceed the Euro 3-5 emissions standards on average by a factor of 4 to 7 over specific test routes
- Vehicles meet certification levels for emissions while operated over standard chassis dynamometer cycles (e.g. FTP-75, NEDC)
  - introduction of tighter emissions limits for the purpose of vehicle certification has not necessarily translated into effective on-road NO_x reductions of the same magnitude
  - NO_2 levels in European member states exceeding ambient air quality standards
  - Exhaust temperature dependency of SCR activity (low load operation, stop/go traffic)
- European Commission established working group to propose modifications to current vehicle certification procedure
  - emissions testing with random driving cycle generation in the laboratory
  - on-road emissions testing with PEMS equipment

=> ~~Need to characterize off-cycle NO_x emissions from Tier2-Bin5 / LEV-II ULEV light-duty diesel vehicles operating in US~~

Weiss, M., Bonnel, P., Hummel, R., Manfredi, U., Colombo, R., Lanappe, G., Le Lijour, P., and Sculati, M., "Analyzing on-road emissions of light-duty vehicles with Portable Emission Measurement Systems (PEMS)," JRC Scientific and Technical Reports, EUR 24697 EN, (2011).

METHODOLOGY - Test Vehicles

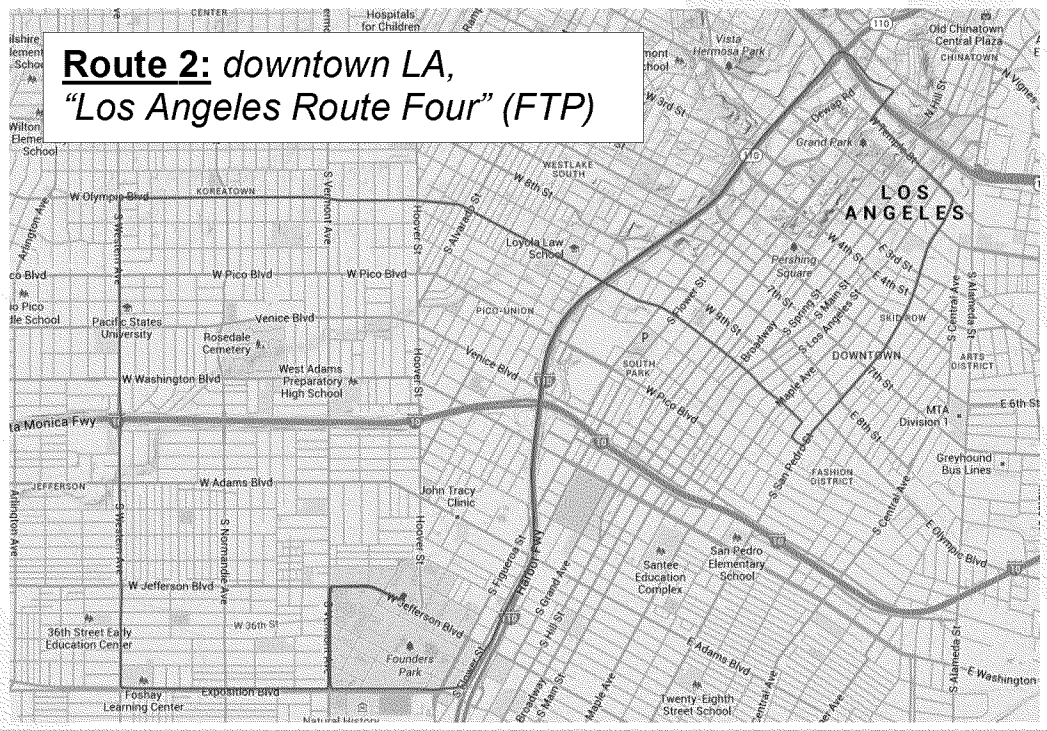
Vehicle		A	B	C
Mileage at test start [miles]		4,710	15,226	15,031
Fuel		ULSD	ULSD	ULSD
Engine displacement [L]		2.0	2.0	3.0
Emission after-treatment technology		**OC, DPF, LNT**	**OC, DPF, urea-SCR**	**OC, DPF, urea-SCR**
Drive train		2-wheel drive, front	2-wheel drive, front	4-wheel drive
Applicable emissions limit	*U.S. EPA*	**Tier2 - Bin5 (LDV)**	**Tier2 - Bin5 (LDV)**	**Tier2 - Bin5 (LDV)**
	CARB	**LEV-II, ULEV**	**LEV-II, ULEV**	**LEV-II, LEV**
EPA Fuel Economy Values [mpg] [1)]	*City*	29	30	19
	Highway	39	40	26
	Combined	33	34	22
EPA CO_2 Values [g/km] [1)]		193	186	288
Actual Test Weight [kg]		1855	1884	2903
Payload [kg]		305	314	533

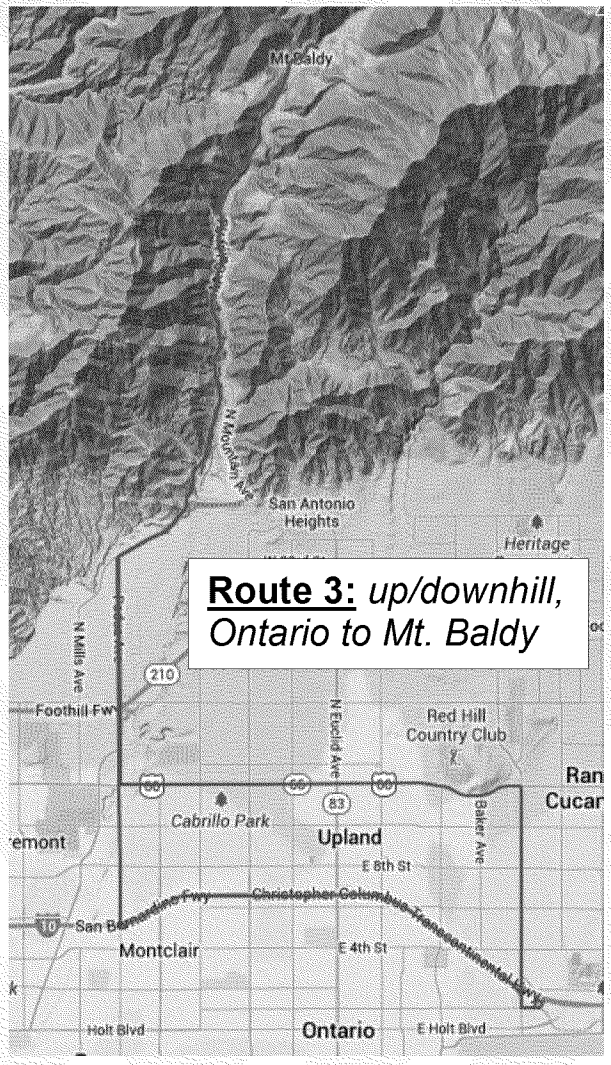
1) *EPA advertised fuel economy and CO_2 emissions values for new vehicles in the US (www.fueleconomy.gov)*

- Vehicles did not indicate any after-treatment or engine malfunction (ECU scan)
- *Vehicles A* and *B* were tested on chassis dynamometer and complied with certification standards for all regulated emissions

METHODOLOGY - Test Routes

- Route 1: *highway driving in Los Angeles*
- Route 2: *urban driving in downtown Los Angeles*
- Route 3: *rural and uphill/downhill driving in LA's foothills*
- Route 4: *urban driving in downtown San Diego*
- Route 5: *urban driving in downtown San Francisco*



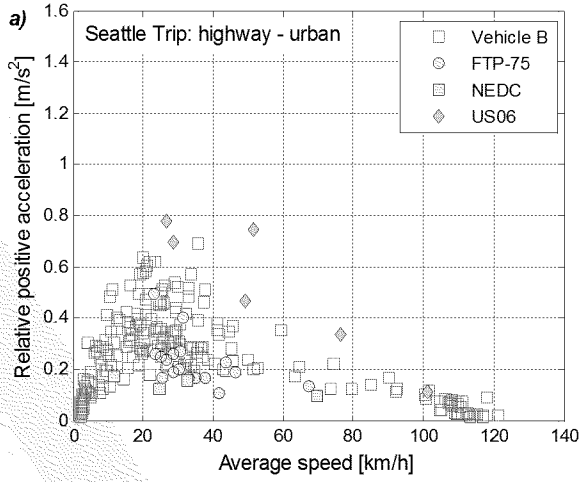


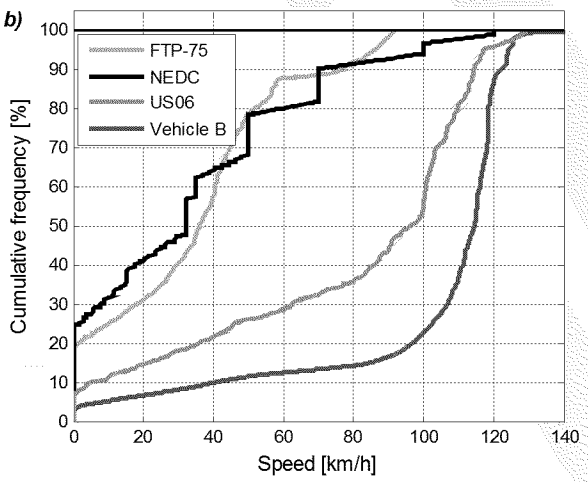
METHODOLOGY - 'Multi-State' Route

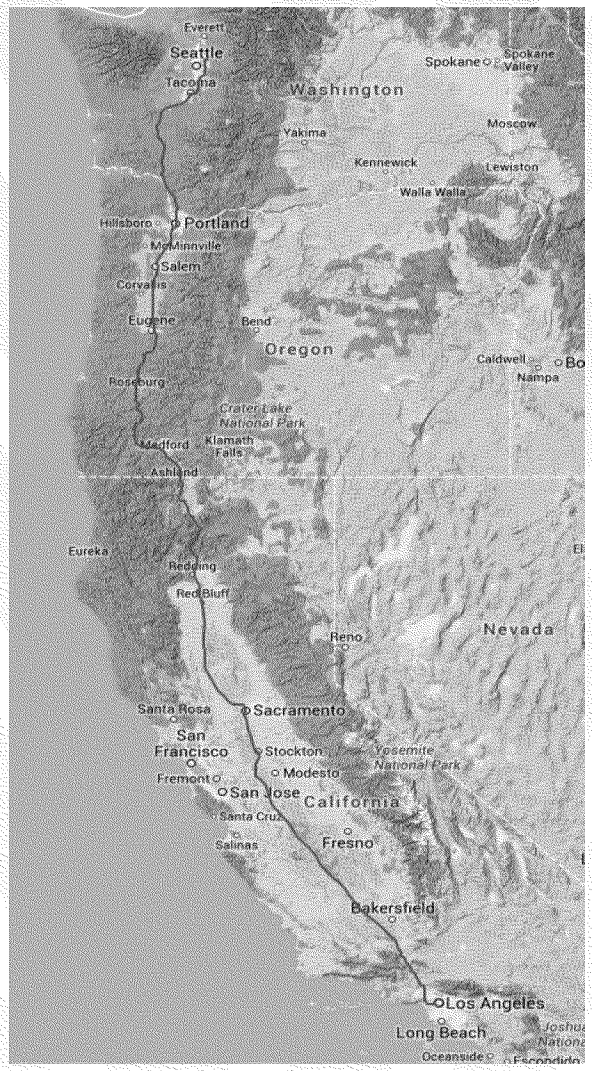
- Los Angeles to Seattle via Interstate I-5N and I-5S

Parameters	Value
Route duration [hr]	39.31
Route distance [km]	3968.10
Avg. vehicle speed [km/h]	100.95
Max. vehicle speed [km/h]	120.00
Avg. RPA [1] [m/s^2]	0.23
Characteristic Power [m^2/s^3]	2.63
Min. elevation [m a.s.l. [2]]	1.0
Max. elevation [m a.s.l.]	1320.1

Parameters	Value
Share [%] (*time based*)	
- idling (≤2 km/h)	3.4
- low speed (>2≤50 km/h)	8.1
- medium speed (>50≤90 km/h)	5.0
- high speed (>90 km/h)	83.5

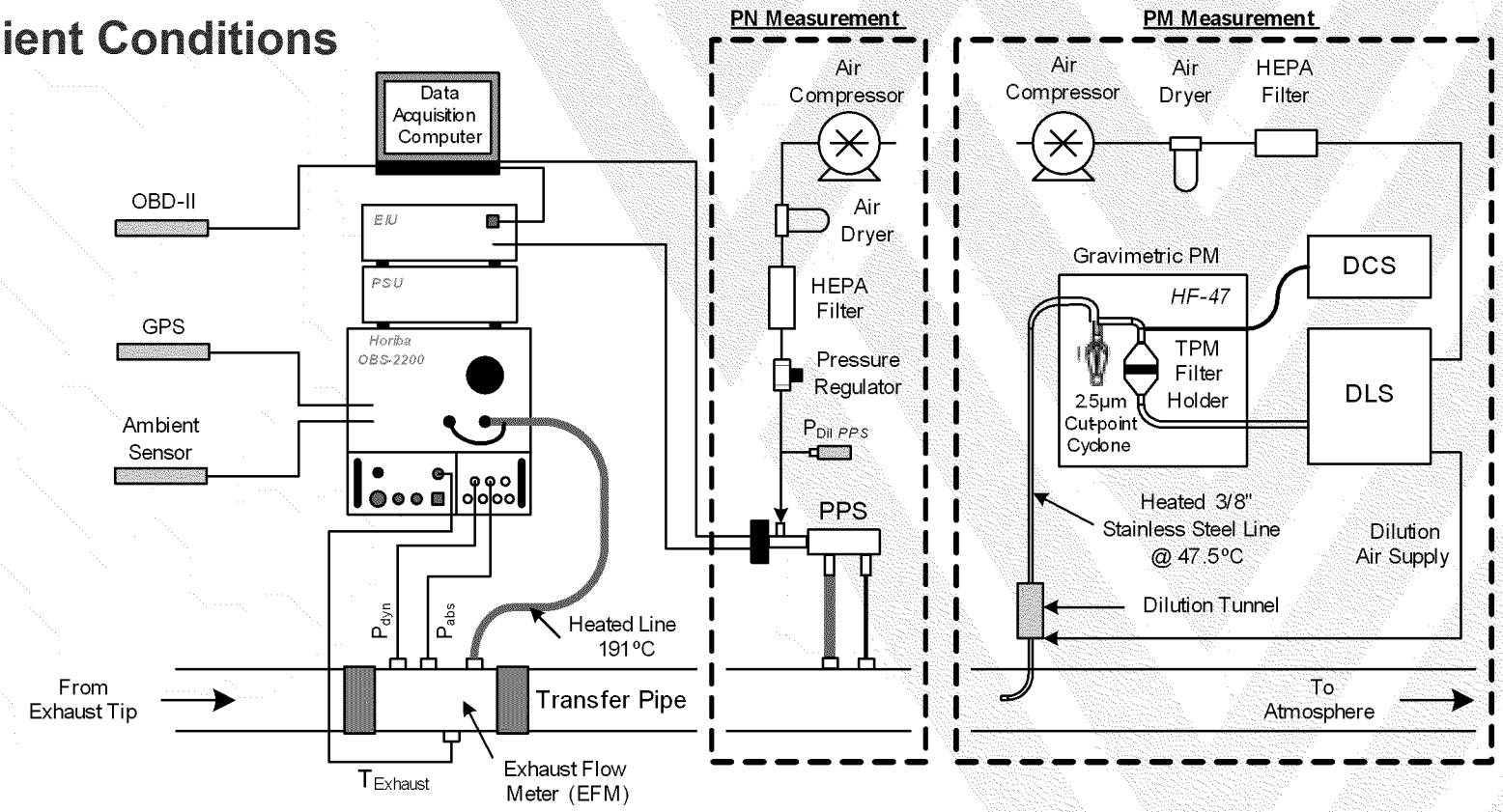






METHODOLOGY - Instrumentation

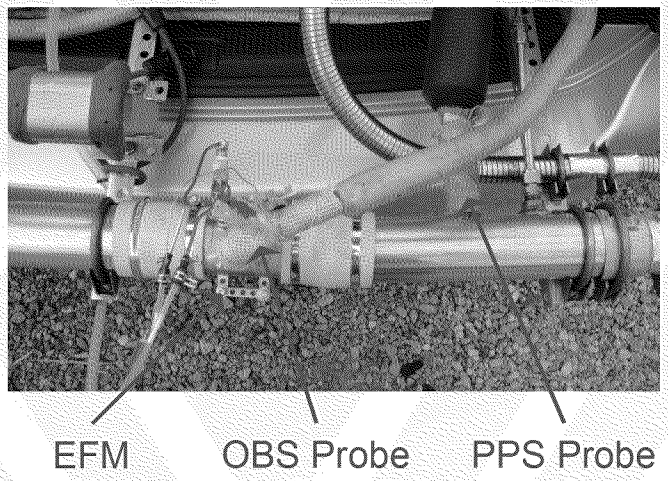
- **Gaseous Emissions:** Horiba OBS-2200 PEMS
- **PM Emissions:** Pegasor Particle Sensor (PPS-M) and Horiba OBS-TRPM
- **ECU OBD-II Data**
- **Ambient Conditions**
- **GPS**



METHODOLOGY - Test Matrix

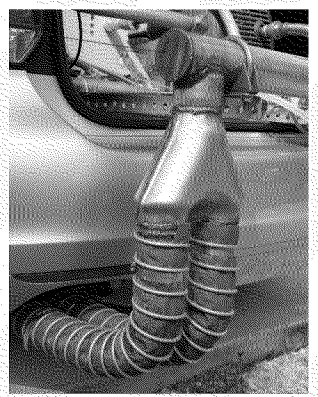
- On-road vehicle test matrix

Route	Vehicle A	Vehicle B	Vehicle C
Route 1: highway	2	2	1
Route 2: urban (Los Angeles)	2	2	2
Route 3: rural - uphill/downhill	2	2	3
Route 4: urban (San Diego)	2	2	
Route 5: urban (San Francisco)		1	2
Cross-State Trip CA to WA		X	



- Emissions measurement matrix

Component	Vehicle A	Vehicle B	Vehicle C
Gaseous emissions	X	X	X
Particle number (*PPS*)	X	X	
Particle mass (*OBS-TRPM*)			X

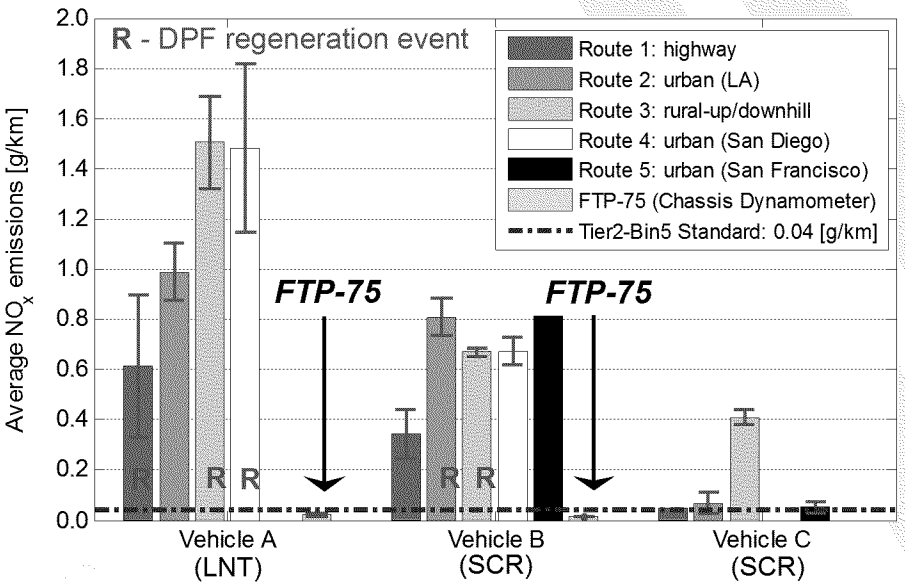


- Instrumentation readiness during 'multi-state' route

Instrument	Total time of operation [hr]	Fraction of total trip duration [%]	Total distance of operation [km]	Fraction of total trip distance [%]
OBS (gaseous emissions)	23.6	60.1	2352.0	59.3
ECU (engine parameter)	31.2	79.4	3143.3	79.2
PPS (particle emissions)	22.7	57.8	2304.6	58.1

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RESULTS - Routes NO_x Emissions

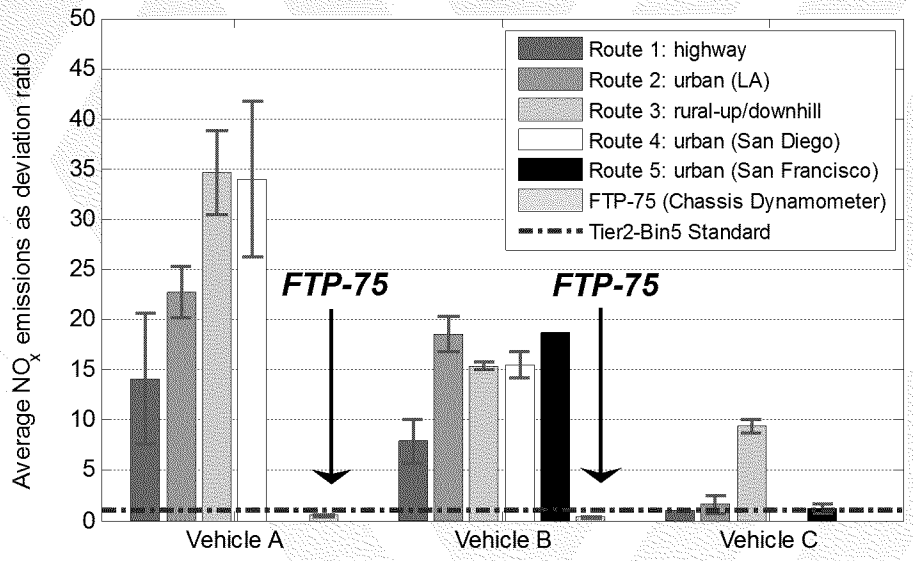


Chassis dynamometer test results for NO_x

Vehicle	NO_x over FTP-75 [g/km]	Rel. to Tier2-Bin5 [%]
Vehicle A	0.022 ±0.006	50.4
Vehicle B	0.016 ±0.002	64.1
Vehicle C	(no data)	(no data)

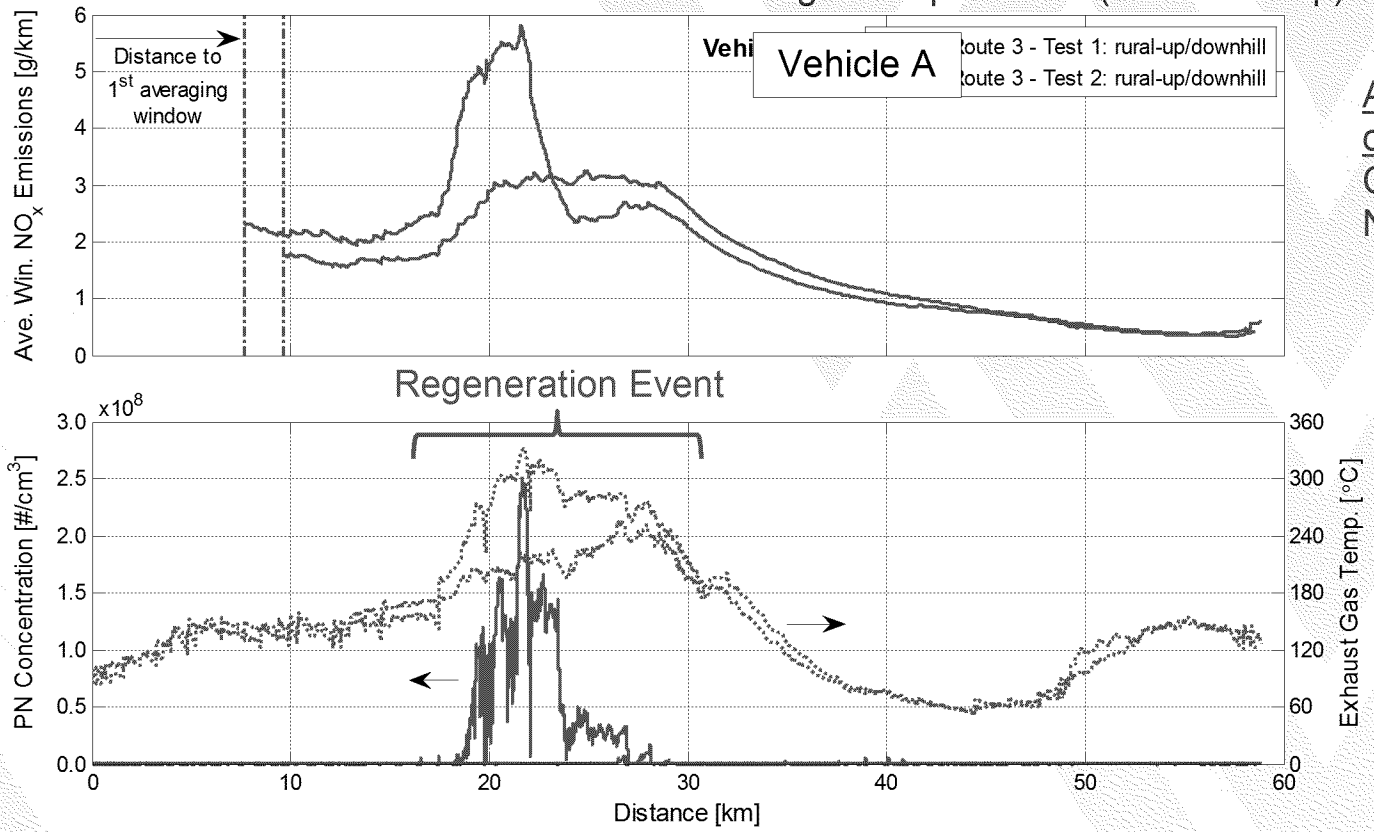
NO_x standard EPA Tier2-Bin5, CARB LEV-II ULEV over FTP-75: ***0.044 g/km***

- Highest NO_x emissions during rural/up-downhill and lowest NO_x during highway driving
- LNT shows deficiencies in NO_x reduction over urea-SCR system
- Increase in NO_x emissions during tests with DPF regeneration event => especially pronounced for *Vehicle A* (LNT)
- Route 1, Vehicle A contains rush-hour and non-rush-hour traffic conditions



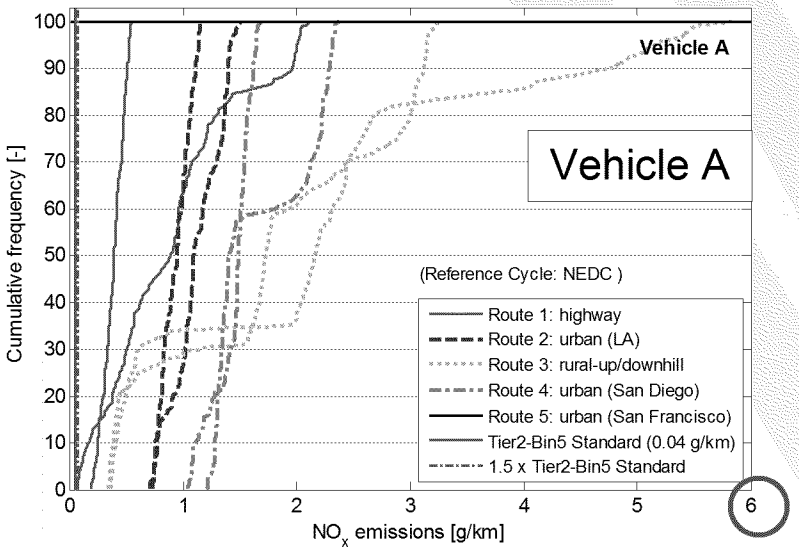
RESULTS - Routes NO_x Emissions

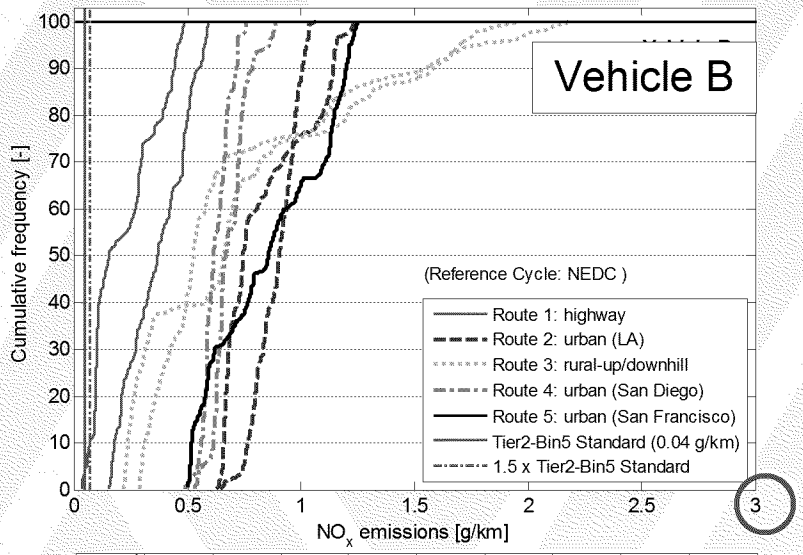
- Comparison of tests with and without DPF regeneration for Vehicle A, Route 3 (up/downhill)
  - Continuous averaging window NO_x emissions vs. distance
  - Particle number concentrations and exhaust gas temperatures (at exhaust tip) vs. distance

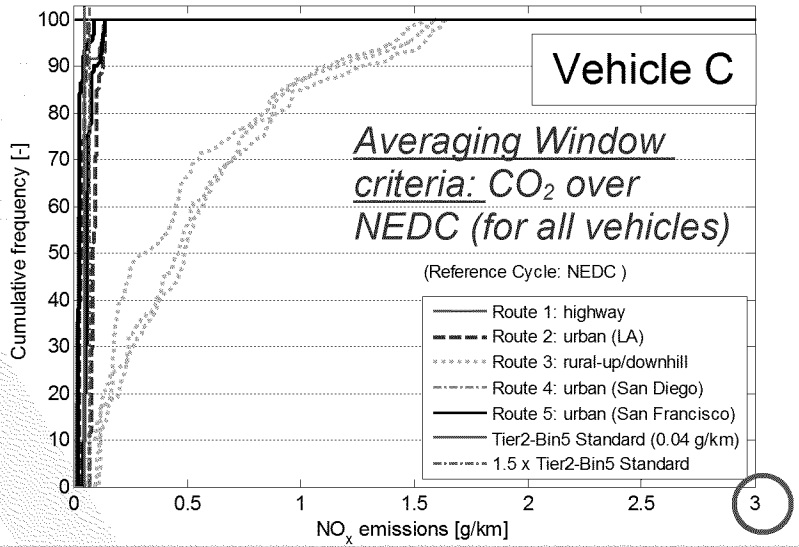


Averaging Window criteria:
CO_2 emissions over NEDC (1938.6g)

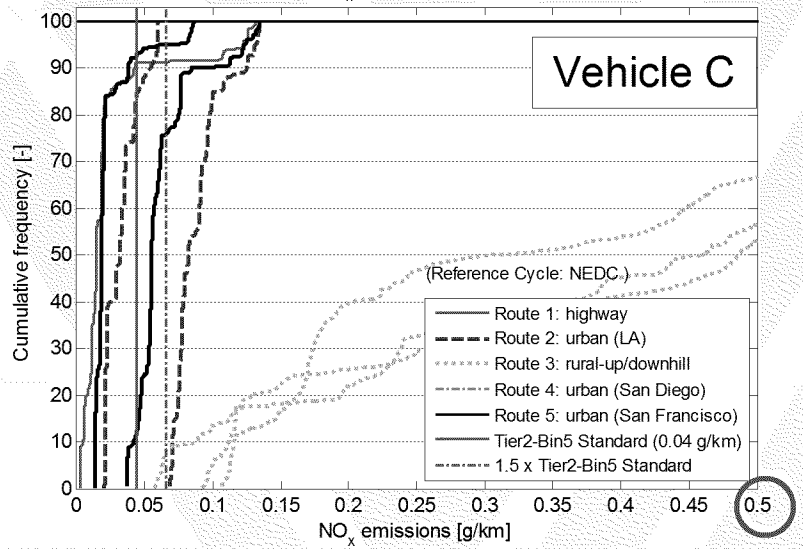
RESULTS - Averaging Window NO_x Emissions



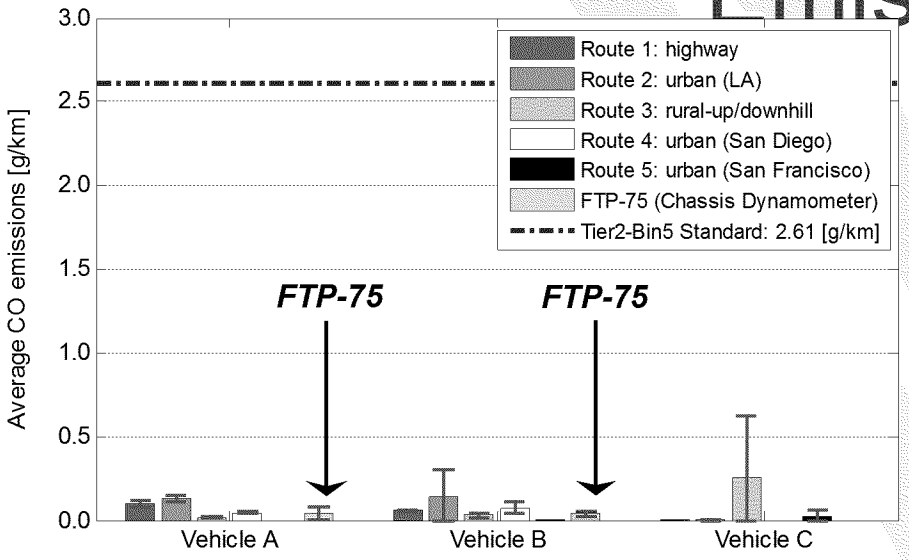




Zoom x-axis



RESULTS - Routes CO/THC Emissions

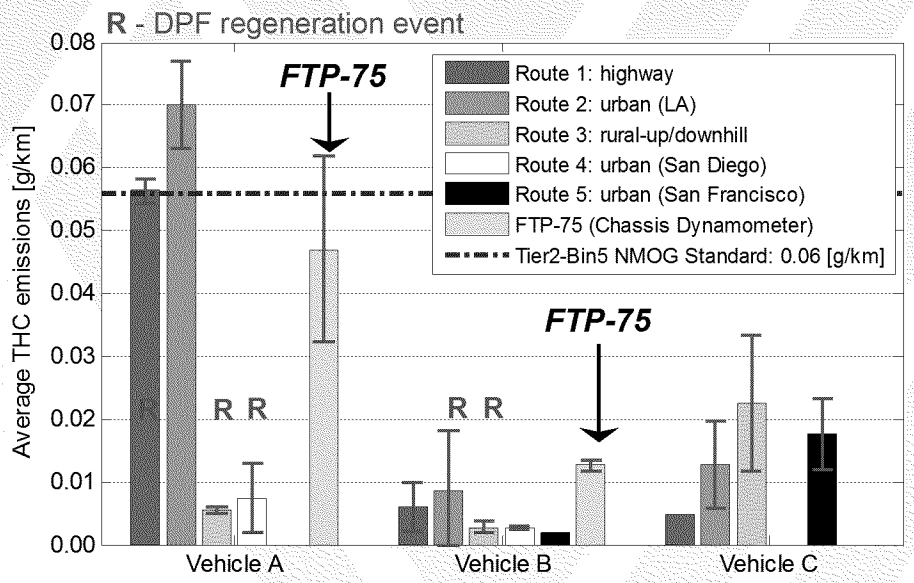


- CO emissions close to two orders of magnitude below Us-EPA Tier2-Bin5 standard
- No particular pattern found for CO as function of driving or route conditions
- *Vehicles A* and *C* show highest CO during urban and highway driving

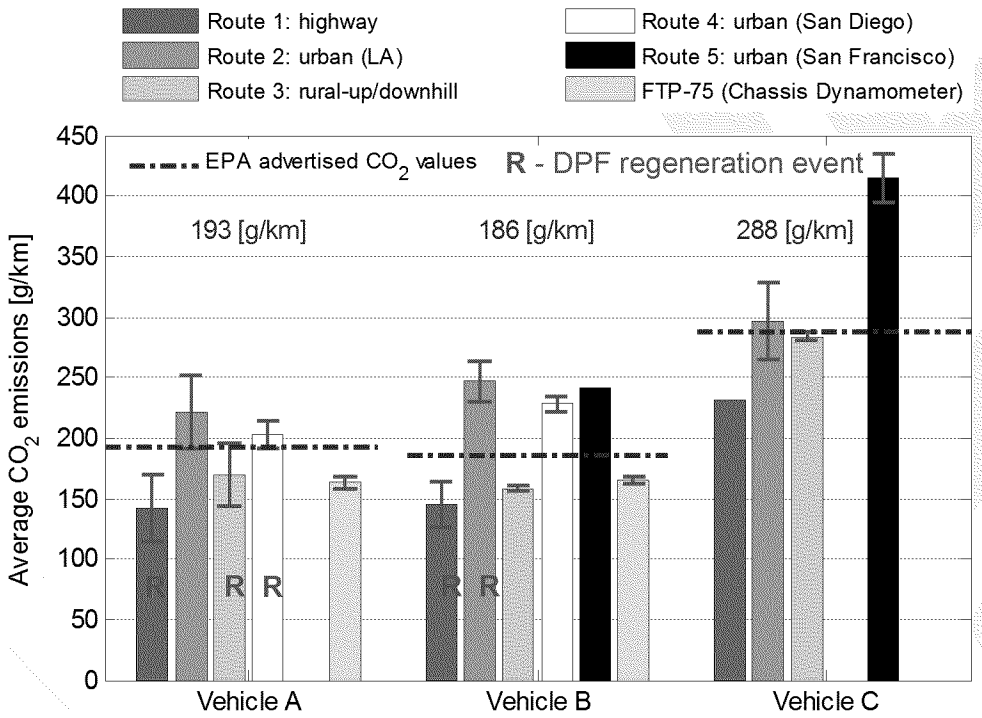
- THC emissions in general below NMOG (NMHC) Tier2-Bin5 standard
- **Caution:** Chassis dynamometer testing showed >80% CH_4/THC ratio
  - Only THC measured during on-road testing

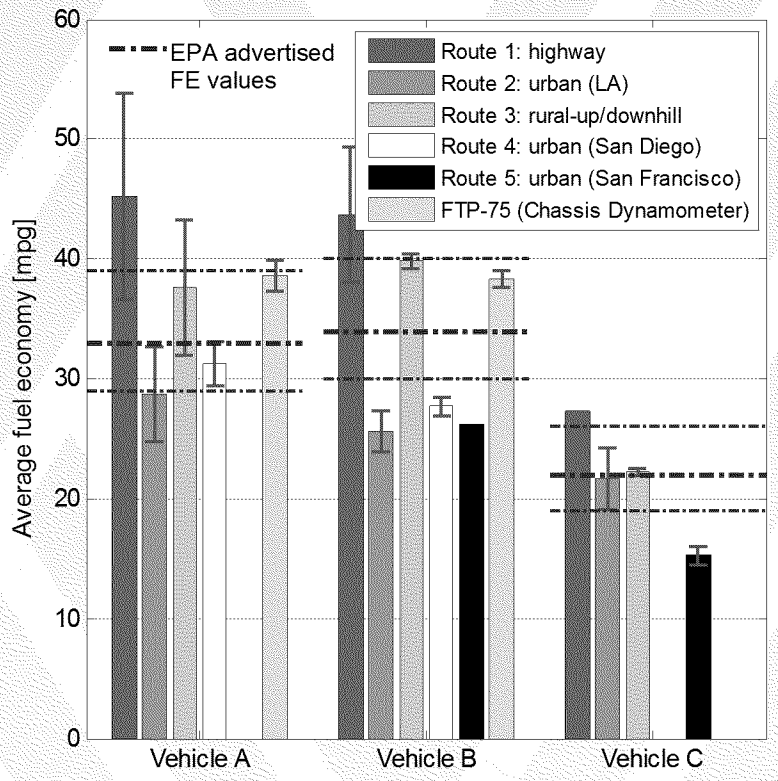
Chassis dynamometer testing over FTP-75

	Vehicle A	Vehicle B
CH4/THC Ratio [%]	99.87	87.23



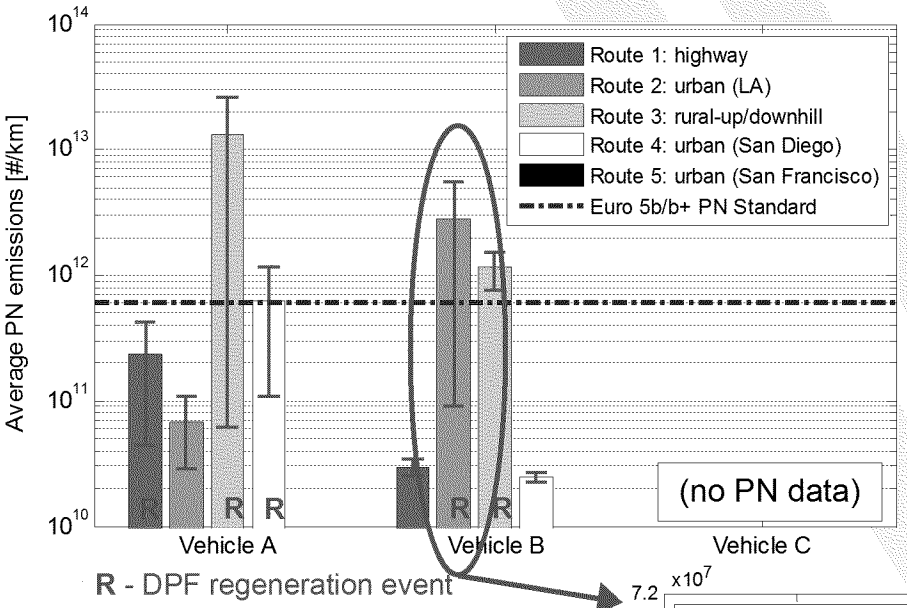
RESULTS - Routes CO_2 Emissions





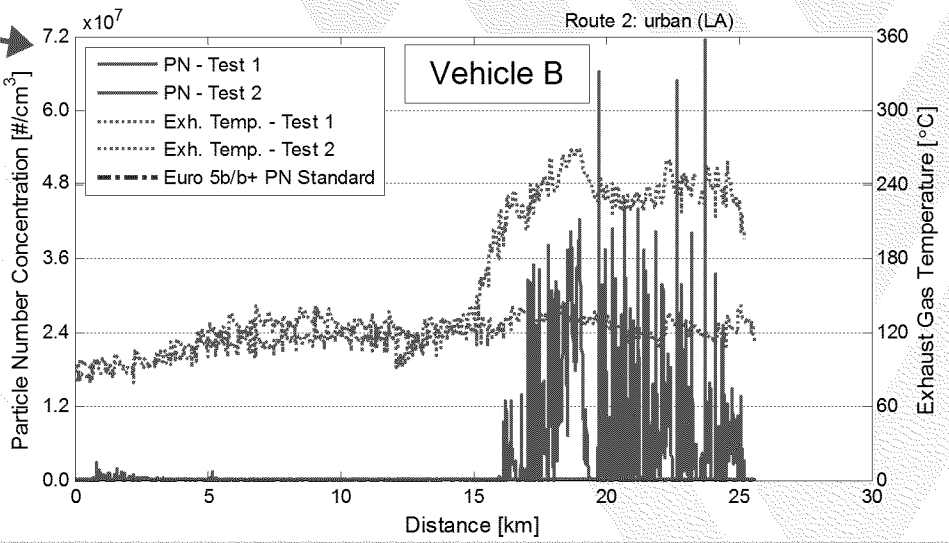
- Highway driving (i.e. Route 1) showed lowest CO_2 emissions / best fuel economy
- Urban/suburban driving showed highest CO_2 emissions / lowest fuel economy
- A 31% increase in CO_2 observed between non-rush-hour and rush-hour highway driving for *Vehicle A*
- Increased CO_2 emissions observed during DPF regeneration events for *Vehicles A* and *B*

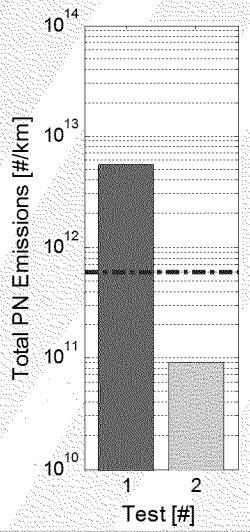
RESULTS - Routes PN Emissions



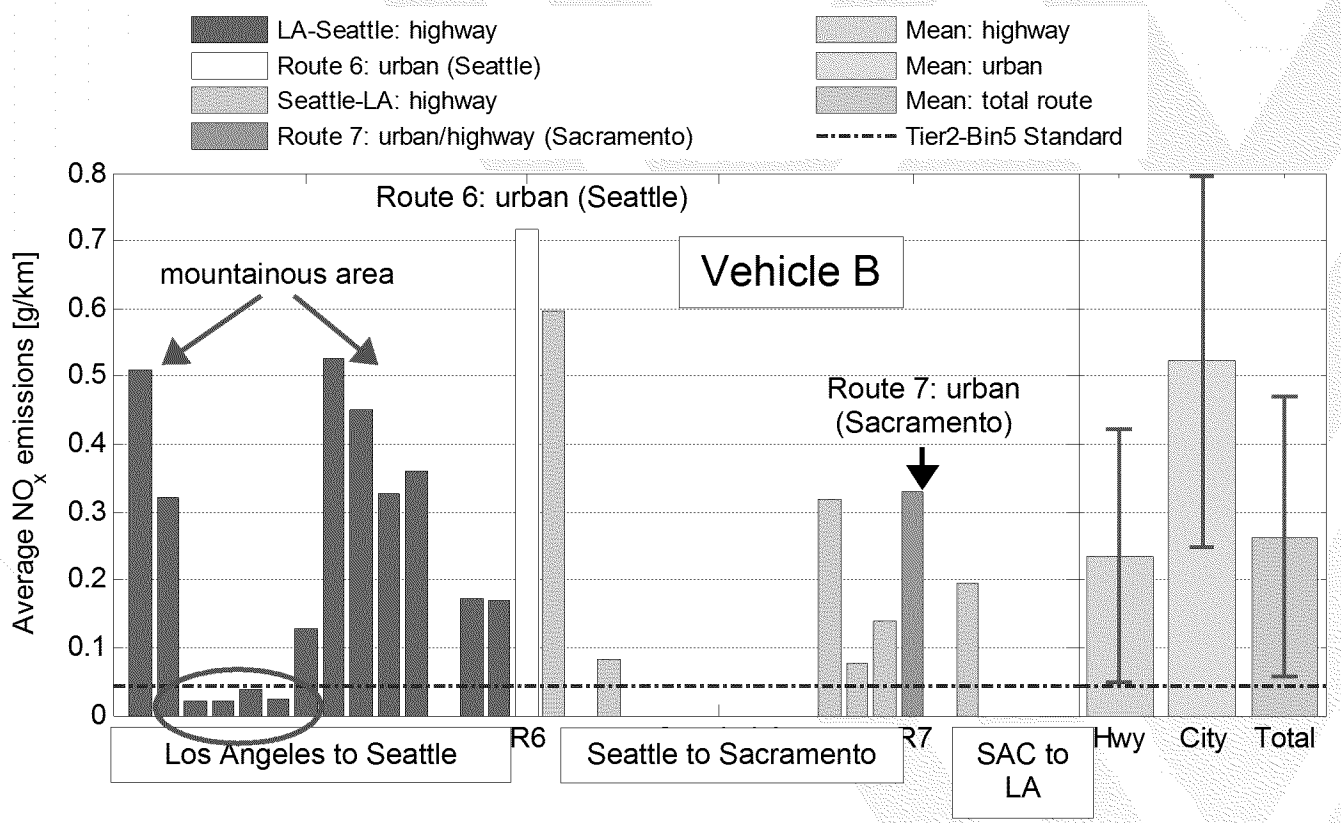
- Euro 5b/b+ standard: 6×10^{11} [#/km]
- **Caution:** PN inferred from PPS measurements => sampling conditioning and particle counting not strictly according to PMP method
- PN increased by up to two orders of magnitude during DPF regeneration events

- In general PN remain one order of magnitude below Euro 5b/b+ standard for tests without DPF regeneration events



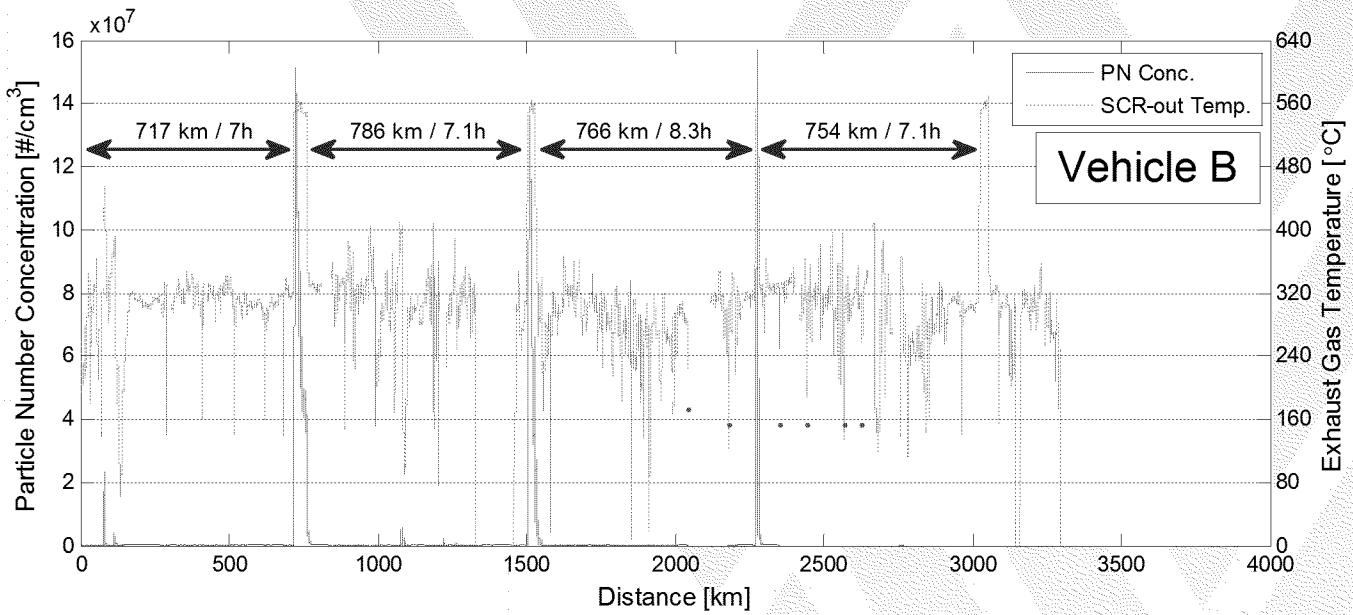


RESULTS - 'Multi-State' Route NO_x



- Exceeding NO_x Tier2-Bin5 standard on average by a factor of 6 over entire route
- NO_x emissions below Tier2-Bin5 level observed during traveling northbound on I-5 through San Joaquin Valley
  - low or negligible changes in altitude (i.e. near zero road grade)
  - Vehicle operated at constant speed conditions of 120km/h (cruise-control mode)

RESULTS - 'Multi-State' Route PN



- Distance and time based DPF regeneration intervals for Vehicle B (*primarily highway*)
  - Avg. distance: 756km ±29km (±1σ)
  - Avg. time: ~7.07hours ±0.06hours (±1σ, not including third event)

Event [#]	Distance to event [km]	Distance based f_{regen} [km]	Time to event [hr]	Time based f_{regen} [hr]	Duration [min]
1	717	*717*	7.0	*7.0*	22.4
2	1,503	*786*	14.1	*7.1*	15.2
3	2,269	*766*	22.3	*8.3*	7.5
4	3,023	*754*	29.5	*7.1*	15.8

CONCLUSIONS

- *Vehicles A* and *B* complied with regulatory standards for all pollutants during chassis dynamometer testing over certification cycles (*Vehicle C* was not tested).
- In-use NO_x emissions
  - *Vehicle A*: 15-35 times higher than the FTP standard,
  - *Vehicle B*: 5-18 times higher than FTP standards,
  - *Vehicle C*: generally below the FTP standard.
- DPF regeneration events were observed to increase NO_x emissions by up to 50% for the LNT equipped vehicle (only small effect on SCR vehicles observed)
- In-use HC emissions were far below the standard for *Vehicles B* and *C* and slightly higher but remaining below the standard for *Vehicle A*.
- In-use CO emissions were far below the standard for all three vehicles.
- In-use PN emissions were generally one order of magnitude below $6x10^{11}$ [#/km] during routes that did not experience DPF regeneration events.
- PN emissions increased by up to two orders of magnitude during DPF regeneration events

RECOMMENDATIONS / OUTLOOK

- Limited sample space (three vehicles, two technologies, only one sample per vehicle) does not allow to draw definitive implications/conclusions.
  - Increased sample numbers required => additional testing of more vehicles needed
- Large discrepancy observed between NO_x emissions from certification testing on chassis dynamometer an on-road testing needs further investigation.
  - Might SFTP (incl. US06 cycle) NO_x standards be too lenient, allowing for increased NO_x emissions under higher load conditions?
- *Vehicle C* has shown that NO_x emissions at the Tier2-Bin5 standard during diverse on-road operation is possible.
- More study needed for very high NO_x emissions observed during particulate filter regeneration events, especially for LNT system
- More work needed to understand PN emissions => PMP method versus capturing below 23nm partilces

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THANK YOU FOR YOUR ATTENTION

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CAFEE Center for Alternative Fuels, Engines and Emissions

ACKNOWLEDGEMENT

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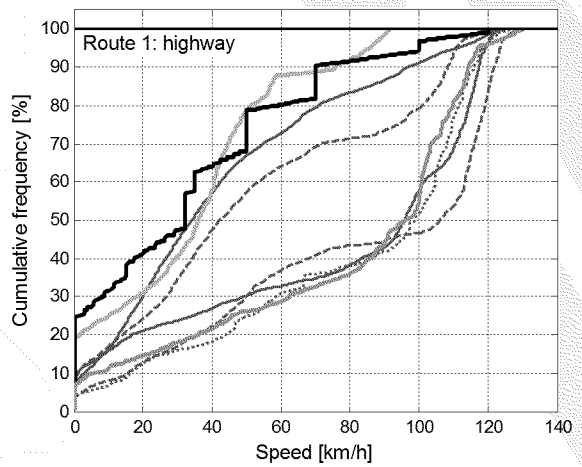
California Environmental Protection Agency
AIR RESOURCES BOARD

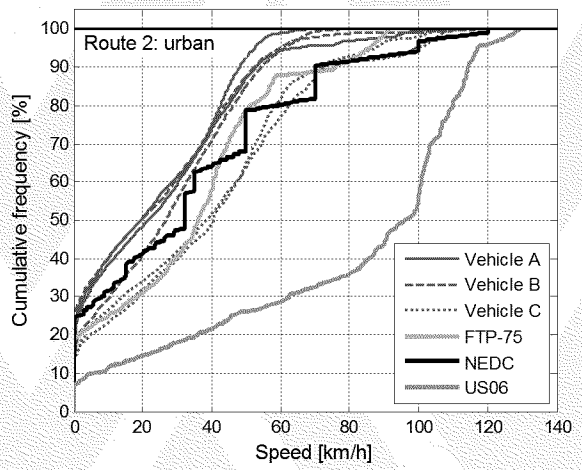
METHODOLOGY - Test Routes

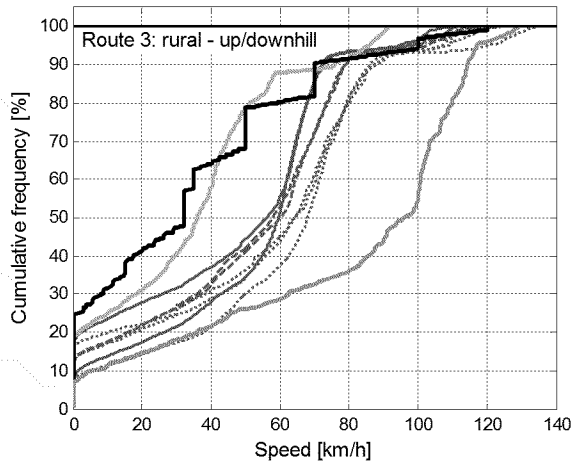
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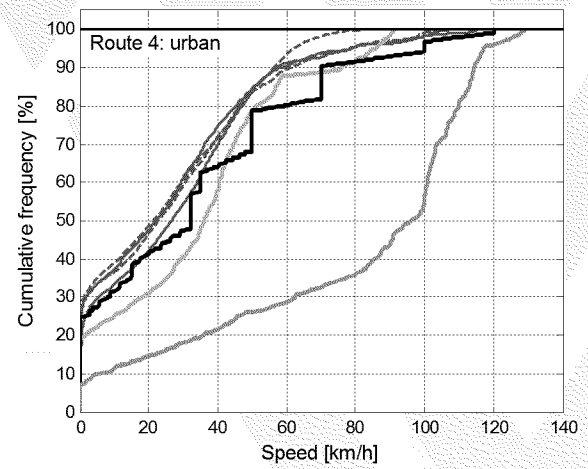
Route	**Route 1**	**Route 2**	**Route 3**	**Route 4**	**Route 5**
Route distance [km]	70.18	25.67	59.09	21.22	26.72
Avg. vehicle speed [km/h]	77.85	24.09	52.27	26.54	24.69
Max. vehicle speed [km/h]	112.65	92.57	112.65	109.87	112.65
Avg. RPA [3] [m/s^2]	0.24	0.27	0.26	0.30	0.33
Characteristic Power [m^2/s^3]	2.57	2.24	3.93	2.60	2.97
Min. elevation [m a.s.l. [4]]	46.0	42.1	300.1	1.1	1.0
Max. elevation [m a.s.l]	360.1	123.5	1319.7	101.4	190.9
Share [%] (*time based*)					
- idling (≤2 km/h)	7.0	23.8	13.5	26.8	27.9
- low speed (>2≤50 km/h)	20.5	64.2	23.9	57.0	58.9
- medium speed (>50≤90 km/h)	14.9	11.2	55.6	12.9	7.5
- high speed (>90 km/h)	57.7	0.8	7.0	3.3	5.6

METHODOLOGY - Test Routes

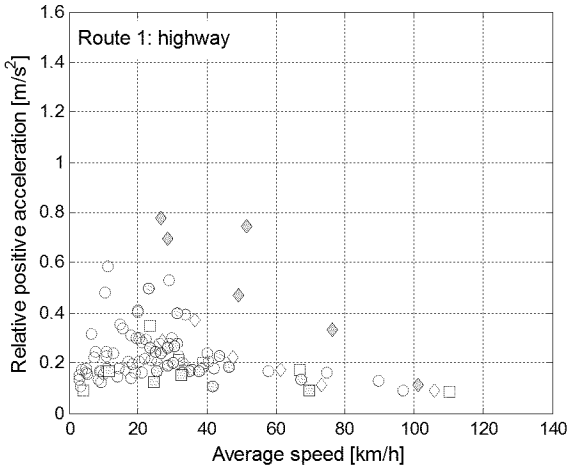


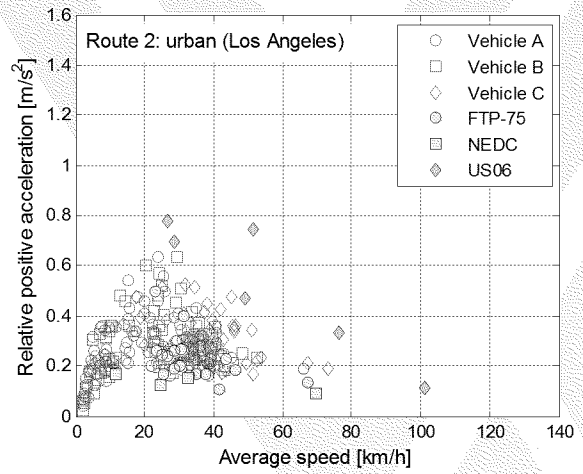


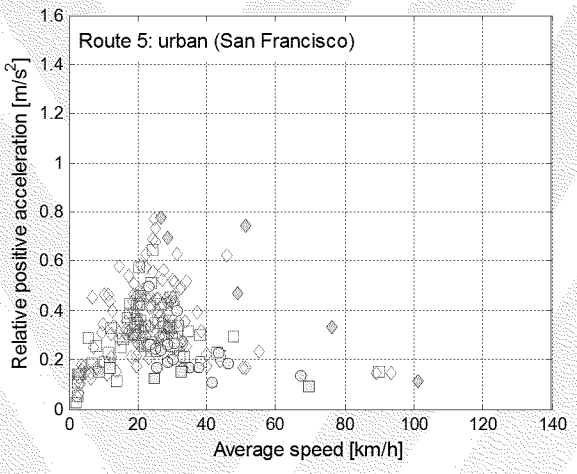


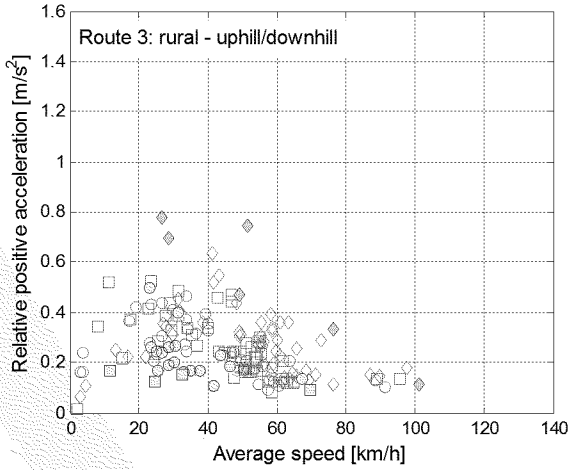


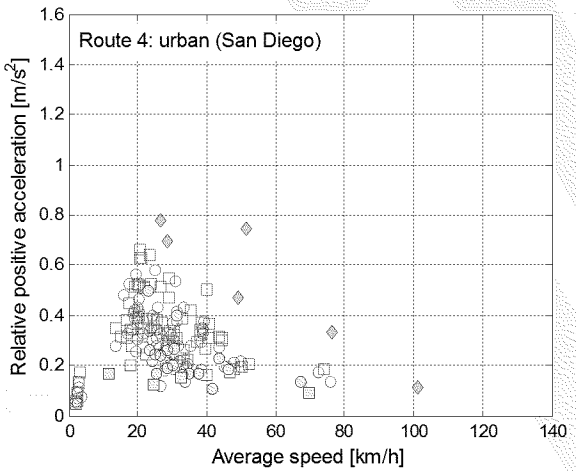
METHODOLOGY - Test Routes











Relative Positive Acceleration

- RPA over given "*micro-trip*"
- *"Micro-trip"*
  - Speed > 2km/h for t ≥ 5sec

$$\mathrm{RPA} = \frac{\int_0^{t_j} \left(v_i \cdot a_i\right) dt}{x_j}$$

RESULTS - Data Analysis

- Applicable regulatory emissions limits; US-EPA Tier2-Bin5 at intermediate useful life (5years/ 50,000 mi) for NO_x, CO, THC (eq. to NMOG), and PM; EPA advertised CO_2 values for each vehicle; Euro 5b/b+ for PN

NO_x [g/km]	CO [g/km]	THC [g/km]	CO_2 [g/km]	PM [g/km]	PN [#/km]
0.043	2.610	0.056	193 (*Vehicle A*) 186 (*Vehicle B*) 288 (*Vehicle C*)	0.006	$6.0x10^{11}$

- Window size criterion for AWM; total CO_2 mass over FTP-75 and NEDC (evaluated at CARB El Monte chassis dynamometer laboratory for Vehicle A and B; taken from EPA certification document for Vehicle C)

Vehicle	CO_2 over FTP-75 [g]	CO_2 over NEDC [g]
Vehicle A	2921.9	1938.6
Vehicle B	2944.8	1841.8
Vehicle C	5042.5	5042.5 [1)]

To: Ex. 6
From: Ball, Joel
Sent: Fri 5/9/2014 5:13:11 PM
Subject: RE: Your EPA Inquiry - emissions warranties & recalls question

Hello Ex. 6

I'm sorry but there is nothing I can do in this case since your vehicle has exceeded the warranty period time limitation.

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
ball.joel@epa.gov

From: Ex. 6
Sent: Monday, May 05, 2014 11:25 PM
To: Ball, Joel
Subject: Re: Your EPA Inquiry - emissions warranties & recalls question

Hello Mr. Ball,

thank you for replying to my message concerning my vehicle. Sorry for the late response to your email.

Technically, the vehicle in question is my wife's. It's under her name and everything. She bought it used from a dealer back in 2004, and is the 2nd owner of the vehicle.

Its a 2002 VW Jetta 4 cylinder, 2.0 Liter engine, non-turbo, automatic.

The VIN # is: Ex. 6 The mileage on the car just hit 68,000 miles this past week!

After further investigation, and speaking with a customer service representative at VW USA Corporate, I found out that this issue I contacted you concerns the catalytic converter and was not repaired/replaced prior to

my wife purchasing the car.

VW is saying that the catalytic converter issue was never considered as a "recall", but rather an"emissions-related voluntary service campaign" (Manufacturer's Recall #VWA-07-20; EPA # 2586; TYPE: I-VSC) in which they extended the warranty on the vehicles affected to a "10 year/ 100,000 mile" warranty. I know that the 10 years has past 2 years ago, but like I stated earlier, the car only has 68,000 miles now. This is due to my wife being permanently disabled, in which both state and federal governments recognize her as such. She was bedridden and/or unable to drive due to multiple back and spinal surgeries throughout the years.

The dealership that sold my wife the car never turned in the change of ownership information to VW Corporate because when I spoke to the representative there, I provided him with her information so that he could update the database.

This means that she never received any letters regarding the extended warranties/ voluntary service campaign! Through no fault of her own!

The only reason I found out about all this is because the check engine light turned on about a month or so ago and had to deal with that in order for the car to pass the smog check as part of this year's car registration.

If this had happened 2 years ago, then I would not be dealing with this issue because VW would have had to honor the extended warranty.

I feel that it is unfair for us to have to pay out of our pocket for something VW knew was faulty in their vehicles. The check engine light had to turn on AFTER the year limit of the extended warranty expired(since the car would still be covered if they only considered the mileage limit of the warranty).

I am asking you for help because both, the dealership and corporate are washing their hands of the issue, when we were never notified of the service campaign through letters sent out to the owners of the cars affected since they never changed the ownership info when my wife purchased the car. The mileage is way under the limit, but because we are dealing with this 2 years after the extended warranty year limit expired and since it was never considered an official recall, they do not have to honor it anymore.

The estimated cost of replacing the catalytic converter is between $1,800-$2,200 that we don't have. My wife is disabled and lives on SSDI, and I have been unemployed for some time now desperately seeking employment. Her registration is due this month, in which, the car will not be legally driveable after May. It is the only vehicle between my wife, our daughter, and myself, who all use it for various reasons.

Even the representative at VW Corporate felt bad and tried to plead with his supervisors for us after letting him know our situation, but unfortunately could not do anything for us.

He even let me know that there is a recall on our car that is older than the service campaign in question. Apparently, there is a recall on the brake light switch in which they WILL honor if we take the car in to get repaired. He said they will honor it because its a safety issue not an emissions problem. He also stated that VW will honor that because it cost hundreds of dollars less than a catalytic converter would cost. He told me this off the record.

Please see if there is anything that can be done! I have tried all other avenues that I am aware of and am up against the wall, not knowing what else to do!!!

I thank you for your time and patience with this long email.

Ex. 6

On Friday, April 18, 2014 1:21 PM, "Ball, Joel" <ball.joel@epa.gov> wrote:

Ex. 6

If your vehicle is subject to a recall you should contact a dealership authorized by the manufacturer to service your vehicle. If you purchased the vehicle used, the recall may have been performed by the previous owner. You can ask the dealer if the recall has already been performed on your vehicle. If you are the original owner and you know the recall has not been

performed, you can request that it be performed now. If the dealer does not help you , you can contact the manufacturer's customer service representative. If the manufacturer refuses to perform the recall, you can contact me with the recall information, make, model, and VIN number of your vehicle and I will look into it for you.

Best regards,

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
ball.joel@epa.gov

Ex. 6 --04/10/2014 03:34:51 AM---Recipient otaq@epa.gov

From: Ex. 6
To: OTAQ@EPA, LeAnn Spradling/RTP/USEPA/US@MSO365
Date: 04/10/2014 03:34 AM
Subject: Your EPA Inquiry - (010032650) Ex. 6 emissions warranties - OTAQ Web

---

Recipient
otaq@epa.gov
UserWord
human
Word
human
comments
After reading all the guidelines and regulations concerning car manufacturer recalls and emissions warranties coverage, I did not find an answer to my particular issue. I have a car that was part of a manufacturer's recall. I was never notified about the recall and so the car was never fixed for that issue. The check engine light now turns on, and I am realizing that the car has past the age restraint of the warranty coverage, but would qualify under the mileage restraint of the warranty coverage. I don't believe it's fair that my car would not qualify for warranty coverage because the issue did not manifest itself until AFTER the age restraint expired AND was never notified about the recall. Can something be done to allow me to fix my car without incurring out-of-pocket costs to repair it?
email
Ex. 6
name
Ex. 6
org

ssubject
emissions warranties

WARNING NOTICE
This electronic mail originated from a federal government computer system of the United States Environmental

Protection Agency (EPA). Unauthorized access or use
of this EPA system may subject violators to criminal,
civil and/or administrative action. For official
purposes, law enforcement and other authorized personnel
may monitor, record, read, copy and disclose all
information which an EPA system processes. Any person's
access or use, authorized and unauthorized, of this EPA
system to send electronic mail constitutes consent to these
terms.

This information is for tracking purposes only.
Submitting script: /cgi-bin/captcha.mail.cgi
Submitting host: /cgi-bin/captcha.mail.cgi (108.80.77.112)
Browser: Mozilla/5.0 (Windows NT 5.1) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/33.0.1750.154 Safari/537.36
Referred: http://www.epa.gov/otaq/oms-cmt.htm
TSSMS: orcdizux
Mail to File: omsmail.txt

To: Ex. 6
From: Ball, Joel
Sent: Fri 5/9/2014 5:22:32 PM
Subject: RE: Emission Warranty

Hello,

Thank you for your inquiry regarding the federally required emissions warranty. The Clean Air Act requires manufacturers of light duty vehicles to warranty all emissions related components for 2 years or 24,000 miles and **only** the specified major emission control components for 8 years or 80,000 miles. The specified major emission control components only include the catalytic converters, the electronic emissions control unit or computer (ECU), and the onboard emissions diagnostic (OBD) device or computer. The evaporative emissions components would be subject to the 2 years or 24,000 mile warranty.

The following web page provides more information regarding the federal emissions warranty requirements: www.epa.gov/obd/pubs/420f09048.pdf

I hope this information is helpful.

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

From: LaCroix, John
Sent: Wednesday, May 07, 2014 6:22 AM
To: Ball, Joel
Subject: FW: Emission Warranty

From: Ex. 6
Sent: Tuesday, May 06, 2014 3:25 PM
To: LaCroix, John

Subject: Emission Warranty

John,

What are the current federal warranty for evaporative canister small leak which

failed internally clogging up N80 valve in the gas tank for a Volkswagen Passat?

Thanks.

C

To: Wright, DavidA[Wright.DavidA@epa.gov]
From: Rodgers, William (EEO)
Sent: Fri 5/9/2014 6:10:25 PM
Subject: RE: Audi Q3

Thanks David.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Friday, May 09, 2014 2:09 PM
To: Rodgers, William (EEO)
Cc: Mazaitis, Vincent; Snyder, Jim
Subject: FW:

William,

Attached are the results from the testing on the vehicle. Please do not hesitate to contact me if you have any questions.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Mazaitis, Vincent
Sent: Friday, May 09, 2014 10:11 AM
To: Wright, DavidA
Subject:

To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Mon 5/12/2014 11:51:04 AM
Subject: RE: Audi Q3 - FAUA-Q3F

Hello David,

We would like to schedule a retest of the FTP cycle considering it is outside the 3%.

Additionally, we would like to insure the vehicle's battery is fully charged after sitting at your facility, therefore we request that a battery charger be put on the vehicle the night before the test. Occasionally a vehicle can be left unlocked with the keys inside resulting in a prolonged drain on the battery.

Please let us know when the retest will take place.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Friday, May 09, 2014 2:09 PM
To: Rodgers, William (EEO)
Cc: Mazaitis, Vincent; Snyder, Jim
Subject: FW:

William,

Attached are the results from the testing on the vehicle. Please do not hesitate to contact me if you have any questions.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Mazaitis, Vincent
Sent: Friday, May 09, 2014 10:11 AM
To: Wright, DavidA
Subject:

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Wright, DavidA
Sent: Mon 5/12/2014 12:48:43 PM
Subject: RE: Audi Q3 - FAUA-Q3F

Bill,

Thank you for the information regarding the key location impacting the battery state of charge. We will keep the key in the scheduling office and not in or on the vehicle to ensure the battery state of charge is not drained. We are able to charge the battery prior to the preconditioning, however, a battery charger will not be put on the vehicle on the night before the test.

In addition to the FTP being outside the 3% window, according to our records, the vehicle was also outside the 3% window for the US06 test. I am wondering if you would also want the US06 re-tested?

Once we know your preference regarding retesting the US06 we will put in the request for retest.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, May 12, 2014 7:51 AM
To: Wright, DavidA
Cc: Mazaitis, Vincent; Snyder, Jim; Allen, Gregory (EEO)
Subject: RE: Audi Q3 - FAUA-Q3F

Hello David,

We would like to schedule a retest of the FTP cycle considering it is outside the 3%.

Additionally, we would like to insure the vehicle's battery is fully charged after sitting at your facility, therefore we request that a battery charger be put on the vehicle the night before the test. Occasionally a vehicle can be left unlocked with the keys inside resulting in a prolonged drain on the battery.

Please let us know when the retest will take place.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Friday, May 09, 2014 2:09 PM
To: Rodgers, William (EEO)
Cc: Mazaitis, Vincent; Snyder, Jim
Subject: FW:

William,

Attached are the results from the testing on the vehicle. Please do not hesitate to contact me if you have any questions.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Mazaitis, Vincent
Sent: Friday, May 09, 2014 10:11 AM
To: Wright, DavidA
Subject:

To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Mon 5/12/2014 1:36:55 PM
Subject: RE: Audi Q3 - FAUA-Q3F

David,

According to the US06 test lab report we show the result was 25.7 MPG. The factory result was 26.2, resulting in a difference of 2.3%. Give me a call this morning to discuss. If I am unavailable please call Greg Allen at 248-754-4209.

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Monday, May 12, 2014 8:49 AM
To: Rodgers, William (EEO)
Cc: Mazaitis, Vincent; Snyder, Jim; Allen, Gregory (EEO)
Subject: RE: Audi Q3 - FAUA-Q3F

Bill,

Thank you for the information regarding the key location impacting the battery state of charge. We will keep the key in the scheduling office and not in or on the vehicle to ensure the battery state of charge is not drained. We are able to charge the battery prior to the preconditioning, however, a battery charger will not be put on the vehicle on the night before the test.

In addition to the FTP being outside the 3% window, according to our records, the vehicle was also outside the 3% window for the US06 test. I am wondering if you would also want the US06 re-tested?

Once we know your preference regarding retesting the US06 we will put in the request for retest.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, May 12, 2014 7:51 AM
To: Wright, DavidA
Cc: Mazaitis, Vincent; Snyder, Jim; Allen, Gregory (EEO)
Subject: RE: Audi Q3 - FAUA-Q3F

Hello David,

We would like to schedule a retest of the FTP cycle considering it is outside the 3%.

Additionally, we would like to insure the vehicle's battery is fully charged after sitting at your facility, therefore we request that a battery charger be put on the vehicle the night before the test. Occasionally a vehicle can be left unlocked with the keys inside resulting in a prolonged drain on the battery.

Please let us know when the retest will take place.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Friday, May 09, 2014 2:09 PM
To: Rodgers, William (EEO)
Cc: Mazaitis, Vincent; Snyder, Jim
Subject: FW:

William,

Attached are the results from the testing on the vehicle. Please do not hesitate to contact me if you have any questions.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Mazaitis, Vincent

Sent: Friday, May 09, 2014 10:11 AM
To: Wright, DavidA
Subject:

To: Good, David[good.david@epa.gov]
Cc: David Robertson[DRobertson@mazdausa.com]; Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Naoyasu Okawa
Sent: Mon 5/12/2014 3:33:21 PM
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

I forgot to follow-up of receiving your answer to my questions (Please see my email below on February, 10). So would you follow-up my questions ?

Best Regards,

Nick

From: Naoyasu Okawa
Sent: Monday, March 17, 2014 3:36 PM
To: 'Good, David'
Cc: David Robertson; Pidgeon, Bill (pidgeon.bill@epa.gov)
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

I am writing to remind you that we asked the below question one month ago. So when you have time please provide your comment or advise to resolve our query.

Please let me know if you have any questions to our question.

Best Regards,

Nick

From: Naoyasu Okawa
Sent: Monday, February 10, 2014 12:52 PM
To: 'Good, David'
Cc: David Robertson
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

We look at the update although, the update below requires us to enter CH4 standard but we understand that there would be no CH4 standard if we selected OPT-CREE.

Therefore if we select OPT-CREE, we do not need to enter CH4 standard into Verify and the standard will leave blank, correct ?

Also, will the Verify system accept data submission or accept without considering a failure even CH4 standard leaves blank, correct ?

If leaving blank has any trouble for the data submission please advise us how we should enter CH4 standard when selecting OPT-CREE.

We would like to confirm beforehand if our method where CH4 standard leaves blank would not cause any issue when submitting data into Verify.

Also, If we should ask this questions to Verify team, please let me know and then I will ask them.

Best Regards,

Nick

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, January 31, 2014 1:37 PM
To: mb-nathan-hinderer ; william.meschievitz@tema.toyota.com; tommy_chang@ahm.honda.com; JRugge@subaru.com; Naoyasu Okawa; dennis.pawlak@na.mitsubishi-motors.com; KhanF@NRD.NISSAN-USA.COM; Tobias Glas; Peace O Uwague; rds116@chrysler.com; ghall12@jaguarlandrover.com; rbarre20@volvocars.com; Beth Borland ; Mark M Poll; christopher.cislo@gm.com; ross.gatzke@porsche.us; balsip@suz.com; Lindsey Jeng
Cc: Dave Barker; peter_meier@ahm.honda.com; tom.beierschmitt@tema.toyota.com; David Robertson; david.patterson@na.mitsubishi-motors.com; yamaday@ntcna.nissan-usa.com; oliver.schmidt@vw.com; Andrea.Antholzner@bmwna.com; vvarjabe@jaguar.com; vvarjabe@jaguarlandrover.com; brian.fitzgerald@daimler.com; gbuffali@volvocars.com; ml90@chrysler.com; tfagerma@ford.com; randall.c.harvey@gm.com; David Geiger; walter.lewis@porsche.us; luis.hernandez@suz.com; Tony D'Ambrosi; Peavyhouse, Robert; French, Roberts; Wehrly, Linc; Wright, DavidA; Snyder, Jim; Ball, Joel; Anderson, Tom; Dalton, Joel; Ott, William
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

To all manufacturers IUVP contacts,

Please note that in Verify Release 13.1 (deployed Jan 24, 2014) that EPA has added two new Test Result/Emission Names which can be used in Verify's IUVP Module only. The new test result/emission names are "Combined CREE" and "Combined OPT-CREE."

Please begin using these IUVP emission names as soon as possible (and don't use the work-around method of entering IUVP combined CREE/OCREE data). [Thanks much for using the "work-around" method of entering combined CREE IUVP data over the past few months.] If you used the "work-around method" of entering CREE/OCREE data, it is not necessary to correct previously entered IUVP data using the new test result/emission names.

Please enter the appropriate Combined CREE or Combined OPT-CREE test results along with the appropriate Combined CREE or Combined OPT-CREE in-use standard, pass/fail results, etc. for the highway test only. As a reminder, individual in-use GHG standards for specific in-use vehicles are required to be included in the manufacturer's final CAFE/GHG model year report, ref. 40 CFR 86.1818-12(d); and 40 CFR 600.512-12(c)(11).

As of the first week in January, 2014, some manufacturers have not been entering

CREE/OCREE data and/or CH4 data into Verify for 2012 IUVP tests. In addition, some manufacturers seem to be missing 2012 low mileage IUVP data for some of their 2012 test groups. Please double check on the status of your 2012 IUVP program and let Bill Pidgeon (pidgeon.bill@epa.gov) and I know if your program is running late. I will try to send manufacturers with missing data a follow-up email message in the next few days.

Tips for entering IUVP data:

1. Please enter Combined CREE or Combined OPT-CREE test results (weighted 55% city and 45% highway) for the highway test procedure only.

2. Please do not enter both Combined CREE and Combined OPT-CREE values. Enter either CREE or OPT-CREE values which are consistent with the way you submitted data in your CAFE/GHG model year report for the applicable model year.

3. Please enter CH4 test results, standards, pass/fail results on the FTP test only.

4. Please enter N2O test results, standards, pass/fail results on the FTP test only if you actually measured N2O----e.g. don't enter the default 0.010 N2O values.

Reminders:

1. 2012 IUVP low mileage testing was required to be completed by Dec 31, 2013 and data submitted to EPA's Verify database prior to Jan 31, 2014, ref. 40 CFR 86.1845-04(b)(4) and 86.1847(b). EPA has extended the window in Verify to Feb 28, 2014 for reporting and correcting 2012 model year low mileage IUVP test data. Please contact Bill Pidgeon by email or at 734-214-4416 if you need to submit data to Verify after that date.

2. When entering IUVP data in Verify, please check your Verify mailbox to make sure that the data was accepted by Verify.

Thanks much.

Please call contact me at 734-214-4450 or by email if you have any questions.

Dave

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Scott Waldman and David Giambusso - Capital New York
Sent: Tue 5/13/2014 9:16:12 AM
Subject: Capital Energy, presented by Indian Point Energy Center—Safe, Secure, Vital: Making Bakken safer, Cahill for fracking, elegy for an energy bill

By Scott Waldman and David Giambusso

Welcome to Capital Energy, your daily guide to news on the manufacture, consumption and regulation of energy in New York. Sign up here.

REFINED RAIL: The scramble to make North Dakota's Bakken crude oil safer when it's being transported on trains has focused on better tracks, slower speeds, and reinforced railcars that bypass urban areas, Reuters' Kristin Hays reports. A new approach, which is used elsewhere, would remove the most volatile elements from the crude before it is being loaded on to rail cars. http://goo.gl/lwJtaE

--There was a minor derailment of an oil train in Albany on Monday. Nothing was spilled, but Canadian Pacific was fined for waiting about five hours to report the accident. http://goo.gl/3pu4At

CAHILL FOR FRACKING: Count G.O.P. attorney general candidate John Cahill among those who want to open New York up to hydrofracking. He told the Syracuse Post-Standard that cheap natural gas could bring Syracuse back as the manufacturing center it once was. http://goo.gl/O8I1kb

-- Ethics complaint filed over Cahill energy company: The Daily News reports a Vestal woman has asked for an investigation into whether Cahill and his energy consulting firm illegally lobbied the state. http://goo.gl/imk9s1

MORE GAS TO NYC: The Transco pipeline is building out its capacity in New York City after a cold winter when demand almost overwhelmed the city's gas infrastructure. Williams Partners, which owns the 1,800 mile pipeline from Texas to New York, announced that the Federal Energy Regulatory Commission approved permits to add 3.2 miles of new pipeline and more compression equipment. The project is slated to begin in June and be done by the end of the year. http://goo.gl/LNJYEK

R.I.P. ENERGY EFFICIENCY BILL: A bipartisan bill to increase energy efficiency in buildings died on the Senate floor Monday, the victim of a political fight over President Obama's climate change regulations and the Keystone XL pipeline, The New York Times' Coral Davenport reports. The bill took more than a year to hammer out and had widespread support in both parties just a week ago. The Times reports it has been seven years since Congress has taken any significant action on energy. http://goo.gl/z8RGXw

CAN WE BE MORE EFFICIENT? How much energy could the U.S. save if it really tried? Brad Plumer asks at Vox. Spoiler: we could double energy efficiency by 2030, since we've already done so since 1970. The major impediments are legislators. http://goo.gl/dh3SnN

RISING SPILLS: The number of spills reported at oil and gas production sites rose 18 percent last year, even though drilling activity declined, EnergyWire's Mike Soraghan reports. There were at least 7,662 spills, blowouts, leaks and other mishaps in 2013 in 15 top states for onshore oil and gas activity. http://goo.gl/cS0Xn1

GAS PAYING FOR BRIDGES: The Marcellus shale will be bankrolling bridge repairs in Erie County this summer, the Erie Times-News reports. The funds for the infrastructure repair come from fees placed on oil and gas drillers. http://goo.gl/Mt4jA1

** **A message from the Indian Point Energy Center: An Open Letter from Four Climate Scientists.** Four of the most respected scientists involved in global warming activism recently published an open letter encouraging fellow scientists and activists to embrace nuclear power as a means of reducing emissions and stabilizing our climate. Follow **@Indian_Point** **

POLITICS AND FRACKING MONEY: In Colorado, the fight over fracking and other energy measures will come to a head on the November ballot, The Denver Post's Lynn Bartels reports. Millions of dollars are expected to be pour into the state before, from deep-pocketed environmentalists to the energy industry to celebrities like Yoko Ono. Tens of thousands of jobs, billions of dollars and the state's environmental health hang in the balance. http://goo.gl/1qkEI8

NEW CON ED HEAD: John McAvoy, who has been president and CEO of Con Edison since the end of last year, was elected chairman of the board of directors, the utility announced today. McAvoy has also served as president and CEO of Orange and Rockland Utilities, Inc., a subsidiary of Con Edison. He earned an MBA from New York University and a bachelor's degree in Mechanical Engineering from Manhattan College. He takes over for Kevin Burke who retired last year. http://goo.gl/gs4erG

OIL SANDS OIL TO SPREAD: With the Keystone XL pipeline stalled amid partisan Washington bickering, Canadian oil companies are proposing many new and expanded pipelines that would connect the oil sands fields with new markets in China and across the world, The New York Times reports. Current plans call for the oil sands to increase production by 25 percent over the next few years and Canadian producers are even starting to see the fighting over Keystone as a silver lining because they've been forced to look for new markets. http://goo.gl/qd5EEJ

VIDEO: Gavin Donohue, head of the Independent Power Producers of New York discusses the state's distributed generation plan on Time Warner Cable news. (Login required) http://goo.gl/J1QHjU

EPA NOTCHES ANOTHER VICTORY: The federal Environmental Protection Agency has been doing pretty well in the courts lately. A federal appeals court upheld the E.P.A.'s stricter soot restrictions in a unanimous ruling last week, notching yet another legal victory for the agency, Politico's Erica Martinson reported. http://goo.gl/054HEe

FROM PUCK TO SOLAR: Mike Richter is one of the most decorated goaltenders in the

history of U.S. ice hockey and was inducted into the hockey hall of fame in 2008. Now, City and State's Jon Lentz reports,, he's one of the state's leading environmentalists and finances renewable energy projects and retrofits for commercial facilities. "There's been a lot of leadership and a lot of hope on renewables," he said. "They're not perfect, but we haven't scratched the surface of deploying existing technology." http://goo.gl/miUIB7

UKRAINE ROUNDUP:

-- New sanctions drive up domestic crude, reports the Wall Street Journal. After the U.S. and European Union announced new sanctions on Russia, the price of domestic crude rose 24 cents, or 0.2%, to settle at $100.84 a barrel on the NYMEX. Brent crude was down $1.46, or 1.3%, to end at $108.12 a barrel in London. http://goo.gl/4BEXKX

-- Gazprom threatens to cut off Ukraine The Kremlin-controlled fuel giant threatened to cut off further shipments of gas to Ukraine unless the country starts pre-paying. In April, Gazprom raised the price of gas by 81 percent. http://goo.gl/jVnqIu

CHINA VS. WORLD: The world basically has no chance to curb global warming if China doesn't begin to limit its coal consumption by 2030, according to a new study by the U.K.'s Center for Climate Change Economics and Policy.

"Whether China moves onto an innovative, sustainable and low-carbon growth path this decade will more or less determine both China's longer-term economic prospects in a natural resource-constrained world, … and the world's prospects of cutting greenhouse gas emissions sufficiently to manage the grave risks of climate change." http://goo.gl/wuqwbF

-- China doesn't have the worst air pollution, however. That distinction belongs to India, which has six of the world's most polluted cities, Vox reports. The particulate matter in the air leads to lung cancer and is largely the result of burning gasoline, diesel and coal for transportation and energy, along with other large-scale manufacturing processes. http://goo.gl/jeHnfo

Want to follow the ebb and flow of all the legislation moving through New York? That's why we have the **DAILY BILL TRACKER:** http://goo.gl/ZnIUwj

RUNNING ON EMPTY: A Nigerian college student built a $6,000 car powered by wind and solar energy out of an old Volkswagen Beetle shell. http://goo.gl/VRTUJ9

WANT MORE ENERGY AND ENVIRONMENT COVERAGE THROUGHOUT THE DAY? To learn more about how to get bite-size "whiteboard" alerts that focus specifically on energy and environment issues sent directly to your inbox, please contact Lauren Englander at lenglander@capitalnewyork.com.

LONG READ: The Ethanol debate -- Reuters does a deep dive on the battle between "Big Corn," "Big Oil" and two Philly-based refineries who helped lobby the White House to cut ethanol subsidies and reduce requirements for blending ethanol into gasoline.

http://goo.gl/CFctt4

SHORT LINKS:

-- Natural gas prices are dropping as supply eclipses demand, The Wall Street Journal reports. http://goo.gl/JjRyuN

-- An agreement to curtail Iran's nuclear industry could be in place. http://goo.gl/8Ge33C

****A message from the Indian Point Energy Center: Global warming activists embrace nuclear power.** Acknowledging the need to sharply reduce greenhouse gas emissions to avoid climate catastrophe, four respected scientists wrote in their open letter that "continued opposition to nuclear power threatens humanity's ability to avoid dangerous climate change." The scientists are Ken Caldeira from the Carnegie Institution, Kerry Emanuel from MIT, James Hansen from the Columbia Earth Institute and Tom Wigley from the National Center for Atmospheric Research. Pointing to the substantial role renewables like wind and solar will play in our energy future, the scientists acknowledge that these sources "can't scale up fast enough to deliver cheap and reliable power at the scale the global economy requires." They conclude that "there is no credible path to climate stabilization that does not include a substantial role for nuclear power." This view is shared by many other respected climatologists and supported by other independent studies. **Learn more.** **

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Go to Capital New York for today's edition and our archive >> Capital Energy

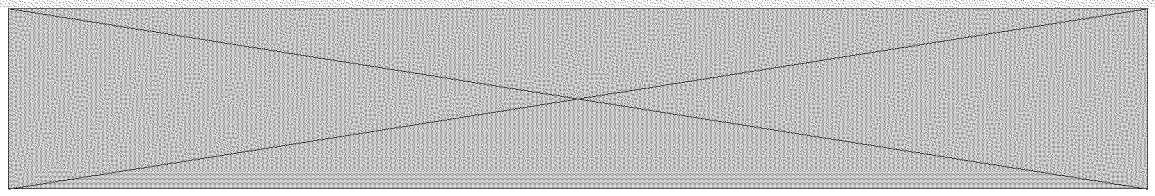
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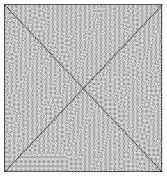
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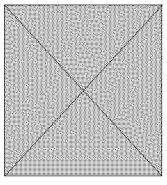
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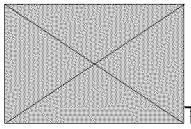
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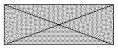
More Tesla Superchargers, 2014 Chevrolet Spark Gas Mileage, New VW Diesel: Today's Car News

May 13, 2014 03:26 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Additional Tesla Motors Supercharger fast-charging stations open in the Northeast, we drive the 2014 Chevrolet Spark with CVT, and Volkswagen develops a new twin-turbocharged diesel engine. The 2014 Chevrolet Spark gets a new CVT automatic transmission, and gives us more to love. The next-generation Tesla electric car...

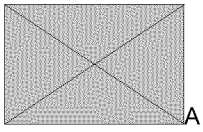
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2013-2014 Ford C-Max Hybrid Recalled Over Airbag Software Issue

May 13, 2014 12:42 pm | feedback@highgearmedia.com (Stephen Edelstein)

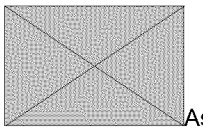
 A recall has been issued for 2013 and 2014 Ford C-Max Hybrid vehicles, to fix faulty airbag software. The recall will correct an issue with software in about 65,000 C-Max models that controls the restraint control module (RCM), which determines when airbags

should deploy in a crash. Errors in RCM programming may result in delayed deployment of the...

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Life With Tesla Model S: New Northeastern Superchargers Now Live

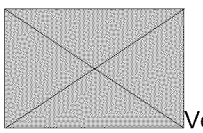
May 13, 2014 12:17 pm | feedback@highgearmedia.com (David Noland)

 As the owner of a Tesla Model S in New York's Hudson Valley, I've long lamented the puzzling dearth of Superchargers in the Northeastern U.S. But in the last few weeks, the official opening of two of Tesla's superfast (120-kilowatt) free DC charging stations in New Jersey and upstate New York--both ideally sited--have left me no choice but to...

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Volkswagen Developing Twin-Turbo 2-Liter Diesel, 10-Speed Direct-Shift Gearbox

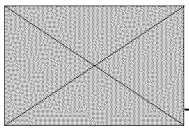
May 13, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 Volkswagen has set itself a target of improving the efficiency of its future models as much as 15 percent by 2020. To do so, the firm is working on a new generation of twin-turbocharged diesel engines, as well confirming its plans for a new ten-speed dual-clutch transmission. Both will find their way into a wide range of Volkswagen models, reports...

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Next-Generation Tesla Electric Car Won't Be 'Model E' After All

May 13, 2014 11:25 am | feedback@highgearmedia.com (John Voelcker)

 Tesla's third-generation car, currently planned for volume production in late 2017, is now officially nameless again. According to Fortune, the company has abandoned its trademark application for the name "Model E," which had been widely assumed to apply to the new vehicle. DON'T MISS: Tesla's Next Electric Car Line: Roundup Of What We Know Now...

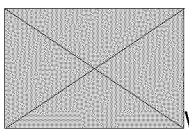
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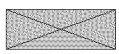
2014 Chevrolet Spark With CVT: Gas Mileage Review

May 12, 2014 05:48 pm | feedback@highgearmedia.com (John Voelcker)

 We're fond of the Chevrolet Spark minicar; it's by far the best-executed of the several smaller-than-subcompact cars sold today. But our fondness had been limited to the five-speed manual version; the four-speed automatic offered in 2013 was, in a word, awful. Now we've driven a 2014 Chevrolet Spark fitted with the newly optional continuously...

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Senators Introduce Six-Year Highway Bill
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Senators Introduce Six-Year Highway Bill
A key Senate committee introduced a six-year transportation bill that includes an expanded freight program.

1Q Driver Pay Accelerates
Driver pay rose in the first quarter at a faster pace than at any time since trucking's last peak period almost a decade ago as industry capacity shrinks and the driver shortage worsens, a new report said.

This week's cartoon: "This Should Solve Our Funding Problems."

Scroll down for more stories.

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Diesel, Gasoline Each Dip 1.6¢ in Second Straight Declines
Diesel and gasoline each slipped 1.6 cents, their second straight drops, with diesel declining to $3.948 a gallon, the Department of Energy reported May 12.

Foxx Calls on Congress to Boost Highway Trust Fund
WASHINGTON — Transportation Secretary Anthony Foxx ramped up his call May 13 for congressional leaders to fund infrastructure projects around the country by shoring up a federal highway account that is expected to be insolvent in August.

VW Secures Backing to Complete Scania Bid, Bolster Heavy-Trucks Division
Volkswagen AG secured enough backing to move forward with its $9.2 billion bid for Scania AB, removing the last major obstacle to a nearly decadelong effort to forge an integrated heavy-trucks unit.

Minnesota Carrier Files Lawsuit Against Caterpillar Over Acert Engines
The final generation of diesel truck engines manufactured by Caterpillar Inc. has generated yet another civil lawsuit, this one filed by Minnesota carrier Scenic

Boundaries Trans Inc.

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FMCSA Proposes Driver Coercion Rule
Federal regulators issued a proposed rule May 13 that would prohibit motor carriers, shippers, receivers or transportation intermediaries from coercing drivers to violate hours-of-service limits, drug and alcohol testing or hazardous materials rules, and other regulations that could jeopardize safety.

Rose Resigns as Expeditors' Chairman
Expeditors International of Washington said former CEO Peter Rose, has resigned as chairman and as a member of the board of directors.

Printouts of AOBRDs Records Not Required, FMCSA Says
The Federal Motor Carrier Safety Administration has issued regulatory guidance clarifying that commercial motor vehicles equipped with automatic on-board recording devices do not need to supply print outs of their hours records to inspectors.

Retail Sales Rise 0.1% in April, Following Largest Gain in Four Years
Retail sales increased 0.1% in April after the biggest increase in four years, the Commerce Department reported May 13.

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CARB Grants Smaller Carriers More Time to Comply With State's New Regulations
The California Air Resources Board has adopted amendments to its truck and bus regulation that will give mostly small, rural and low-mileage motor carriers more time to achieve compliance, exasperating larger carriers.

Price of Imported Goods Declines in April
The price of goods imported to the United States fell in April, the first decline since November, the Labor Department reported May. 13.

Business Inventories Rise in March
Business inventories rose 0.4% in March, and sales increased 1%, the Commerce Department reported May 13.

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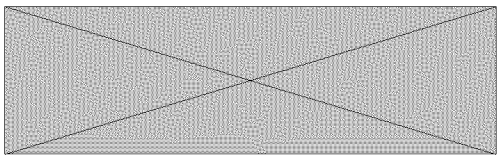
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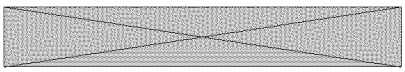
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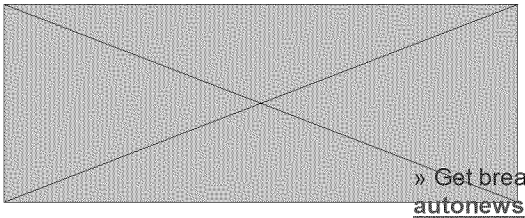
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Subject: DAILY: Chrysler to embrace hybrids to meet mpg targets | VW banks on new SUV to revive U.S. sales | Porsche sued over Paul Walker crash | Buick joins backup-camera bandwagon | The future look of Mazda stores

Today's most read story

VW says it expects new SUV to revitalize U.S. sales as it outlines 2018 strategy

May 13, 2014



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TOP NEWS

Marchionne: Chrysler to embrace hybrids to meet mpg rules

UPDATED: 5/13/14 4:42 pm ET
3:04 pm U.S. ET | May 13

Fiat Chrysler Automobiles CEO Sergio Marchionne said today that Chrysler Group increasingly will have to turn to electrification of its vehicles to meet the government's rules requiring cars and light trucks to average 54.5 mpg by the 2025 model year. ... » READ

VW says it expects new SUV to revitalize U.S. sales as it outlines 2018 strategy

6:28 am U.S. ET | May 13

Volkswagen AG plans to redouble efforts to boost flagging sales in the United States as well as grow in Brazil as Europe's largest automaker chases Toyota Motor Corp.'s global lead. ... » READ

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Sonic Automotive Presenting at the TLS Auto Customer Centricity Summit

Buying Behavior Has Changed - Why Hasn't the Industry? - Used car sales are essentially just as they were 40 years ago, meaning the model is broken. **Marti Eulberg, Director – Brand Management** will explain how Sonic is redefining the used car model and transforming customer expectations for used car dealers.

For more info visit **www.tlsummits.com.**

Buick joins list of brands making backup cameras standard before U.S. deadline

4:14 pm U.S. ET | May 13

General Motors' Buick brand, following others in getting ahead of a new federal safety requirement, said today it will make backup cameras standard on all 2015 models. ... » READ

Porsche sued over 'Fast and Furious' actor Paul Walker's fatal crash

UPDATED: 5/13/14 3:56 pm ET - includes copy of suit

11:23 am U.S. ET | May 13

Kristine Rodas, the widow of Roger Rodas -- who in November 2013 was killed along with "Fast and Furious" actor Paul Walker in a Porsche Carrera GT crash -- filed a wrongful death lawsuit in Los Angeles against the automaker. ... » READ

Toyota exec: Vendors don't have to move to Texas

12:01 am U.S. ET | May 12

Vendors such as advertising agency Saatchi & Saatchi Los Angeles and experiential marketing firm George P. Johnson will "have to decide for themselves" whether to move employees or set up offices near Toyota's new Plano, Texas, headquarters. ... » READ

Mazda's dealership design about to evolve

12:01 am U.S. ET | May 12

Mazda will roll out a new dealership design program

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to retailers in July. ... » READ

Marchionne Q&A: CEO discusses Alfa, aluminum and UAW wages

Subaru plans more U.S. capacity, unveils new technology

Tesla posts Q1 net loss of $49.8 million

Fiat stock tumbles as investors question Marchionne's plan

Nissan's marketing chief Brancheau departs

Viral video rankings for week of 5/12/2014

Godzilla goes mega-viral; Cadillac captures a promise kept

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The first numbers for Fiat's "Godzilla" campaign are in -- and it's all good news. ... » Watch the videos

Porsche tells N.A. dealers to cease using live Tigers for Macan marketing

4:22 pm U.S. ET | May 13

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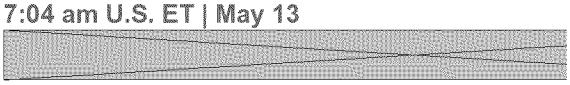
» May 13 - LA Marketing Seminar
» June 3 - Rising Stars
» June 4 - ANE Congress
» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

» May 14 - Online Shoppers into Buyers
by MAX Digital

VW says four-month group sales rise 6% to 3.2 million

7:04 am U.S. ET | May 13



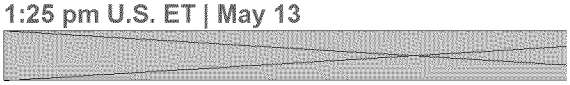
Mercedes sales close in on BMW, Audi in April

7:19 am U.S. ET | May 13



Detroit 3 consider aid to art museum in city's bankruptcy

1:25 pm U.S. ET | May 13



Superior awards new CEO Stebbins $2.6M in stock incentives

12:32 pm U.S. ET | May 13



Real or stock photos? The color's the thing

12:01 am U.S. ET | May 12



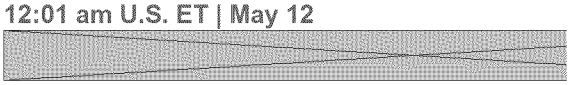
Mahindra plans to add about 110 engineering jobs at suburban Detroit tech center

12:17 pm U.S. ET | May 13



Soccer pitch: Hyundai, VW target Hispanics

12:01 am U.S. ET | May 12

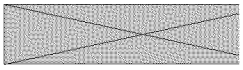


BMW names motorcycle exec Blesse as CEO of Canada unit

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» June 12 - Group Vehicle Redistribution
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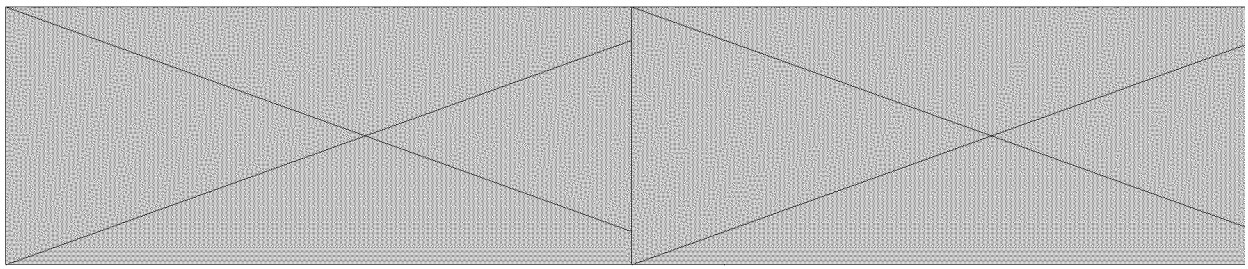


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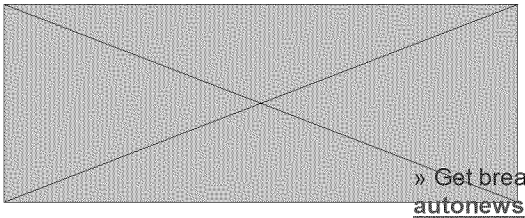
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 5/13/2014 9:02:15 PM
Subject: DAILY: Chrysler to embrace hybrids to meet mpg targets | VW banks on new SUV to revive U.S. sales | Porsche sued over Paul Walker crash | Buick joins backup-camera bandwagon | The future look of Mazda stores

Today's most read story

VW says it expects new SUV to revitalize U.S. sales as it outlines 2018 strategy

May 13, 2014



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TOP NEWS

Marchionne: Chrysler to embrace hybrids to meet mpg rules

UPDATED: 5/13/14 4:42 pm ET
3:04 pm U.S. ET | May 13

Fiat Chrysler Automobiles CEO Sergio Marchionne said today that Chrysler Group increasingly will have to turn to electrification of its vehicles to meet the government's rules requiring cars and light trucks to average 54.5 mpg by the 2025 model year. ... » READ

VW says it expects new SUV to revitalize U.S. sales as it outlines 2018 strategy

6:28 am U.S. ET | May 13

Volkswagen AG plans to redouble efforts to boost flagging sales in the United States as well as grow in Brazil as Europe's largest automaker chases Toyota Motor Corp.'s global lead. ... » READ

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Sonic Automotive Presenting at the TLS Auto Customer Centricity Summit

Buying Behavior Has Changed - Why Hasn't the Industry? - Used car sales are essentially just as they were 40 years ago, meaning the model is broken. **Marti Eulberg, Director – Brand Management** will explain how Sonic is redefining the used car model and transforming customer expectations for used car dealers.

For more info visit **www.tlsummits.com.**

Buick joins list of brands making backup cameras standard before U.S. deadline

4:14 pm U.S. ET | May 13

General Motors' Buick brand, following others in getting ahead of a new federal safety requirement, said today it will make backup cameras standard on all 2015 models. ... » READ

Porsche sued over 'Fast and Furious' actor Paul Walker's fatal crash

UPDATED: 5/13/14 3:56 pm ET - includes copy of suit

11:23 am U.S. ET | May 13

Kristine Rodas, the widow of Roger Rodas -- who in November 2013 was killed along with "Fast and Furious" actor Paul Walker in a Porsche Carrera GT crash -- filed a wrongful death lawsuit in Los Angeles against the automaker. ... » READ

Toyota exec: Vendors don't have to move to Texas

12:01 am U.S. ET | May 12

Vendors such as advertising agency Saatchi & Saatchi Los Angeles and experiential marketing firm George P. Johnson will "have to decide for themselves" whether to move employees or set up offices near Toyota's new Plano, Texas, headquarters. ... » READ

Mazda's dealership design about to evolve

12:01 am U.S. ET | May 12

Mazda will roll out a new dealership design program

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to retailers in July. ... » READ

Marchionne Q&A: CEO discusses Alfa, aluminum and UAW wages

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Fiat stock tumbles as investors question Marchionne's plan

Nissan's marketing chief Brancheau departs

Viral video rankings for week of 5/12/2014

Godzilla goes mega-viral; Cadillac captures a promise kept

12:01 am U.S. ET | May 13

The first numbers for Fiat's "Godzilla" campaign are in -- and it's all good news. ... » Watch the videos

Porsche tells N.A. dealers to cease using live Tigers for Macan marketing

4:22 pm U.S. ET | May 13

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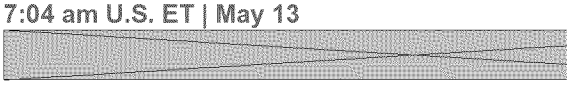
» May 13 - LA Marketing Seminar
» June 3 - Rising Stars
» June 4 - ANE Congress
» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For

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» May 14 - Online Shoppers into Buyers
by MAX Digital

VW says four-month group sales rise 6% to 3.2 million

7:04 am U.S. ET | May 13



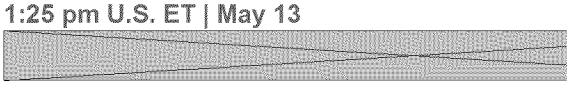
Mercedes sales close in on BMW, Audi in April

7:19 am U.S. ET | May 13



Detroit 3 consider aid to art museum in city's bankruptcy

1:25 pm U.S. ET | May 13



Superior awards new CEO Stebbins $2.6M in stock incentives

12:32 pm U.S. ET | May 13



Real or stock photos? The color's the thing

12:01 am U.S. ET | May 12



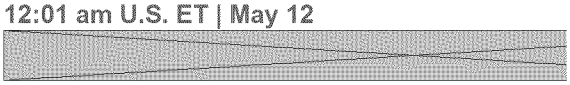
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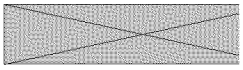


BMW names motorcycle exec Blesse as CEO of Canada unit

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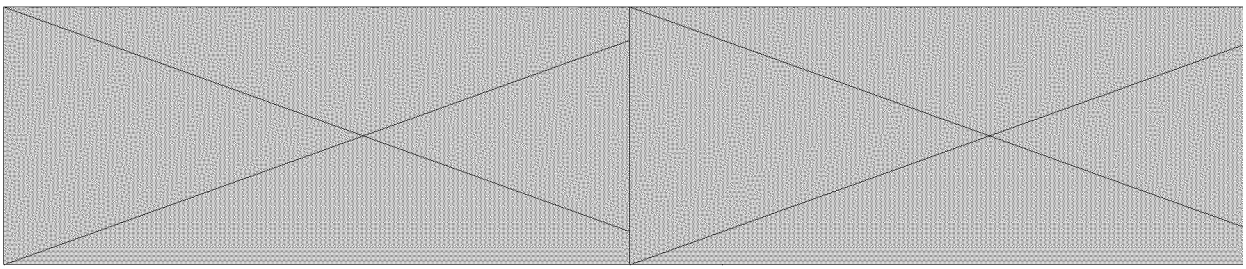


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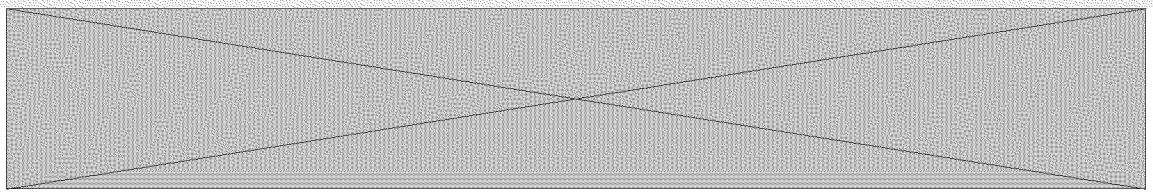
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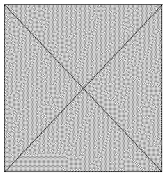
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Wed 5/14/2014 4:05:01 PM
Subject: Green Car Report Daily Headlines

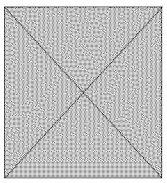
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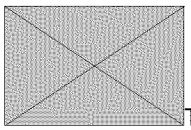
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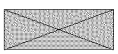
2015 VW Golf Priced, Tesla Cartoon, 2016 Fiat 500X Coming Soon: Today's Car News

May 14, 2014 03:34 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: The 2015 Volkswagen Golf Launch Edition starts under $19,000, a wonderful cartoon about a Tesla Model S attracted enthusiasm, and the 2016 Fiat 500X crossover will arrive July 4. All this and more on Green Car Reports. The 2015 Volkswagen Golf Launch Edition is priced under $19,000, but the rest of the redesigned Golf...

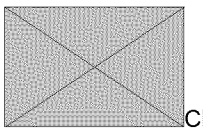
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China Push For Lower Emissions: Smaller, More Efficient Engines, Mild Hybrids

May 14, 2014 03:20 pm | feedback@highgearmedia.com (Stephen Edelstein)

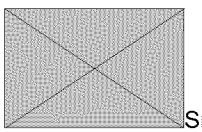
 China may be the world's largest car market, but increased air pollution has created a public backlash against the automobile. It's also spurring the

government to take action, and carmakers are likely to respond using the same suite of technologies they use in the rest of the world to cut emissions and boost fuel economy: smaller, more efficient...

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Electric-Truck Maker Smith Gets $42 Million In New Investment

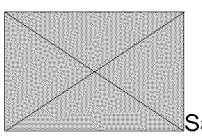
May 14, 2014 03:10 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Smith Electric Vehicles may be rebounding after it suspended operations last month. The Kansas City-based maker of electric trucks announced that it has secured a $42 million investment commitment from Sinopoly Battery Limited--a producer of lithium-ion batteries and other electric-car components. The first $2 million of the commitment has already...

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2015 Ford Ford Focus EcoBoost Three-Cylinder: Manual Gearbox Only

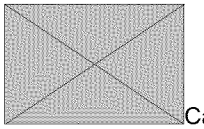
May 14, 2014 03:06 pm | feedback@highgearmedia.com (John Voelcker)

 Sales of the 1.0-liter three-cylinder version of the 2015 Ford Focus compact are likely to be dwarfed by those of the more powerful and familiar 1.6-liter four. After all, in a segment that's often price-sensitive, Ford is asking buyers to pay more for a slower car--although one that's expected to earn EPA fuel-efficiency ratings estimated at 37...

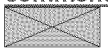
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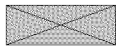
BMW Says It Will Triple Production Of Carbon Fiber For Electric Cars

May 14, 2014 02:07 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Carbon fiber is still a fairly exotic material in the automotive industry, but it is likely to become more common--and perhaps faster than expected. BMW said last Friday that it will triple production of carbon fiber at its facility in Moses Lake, Washington, to use in its carbon fiber-reinforced plastic (CFRP) body shells. Currently the plant--a...

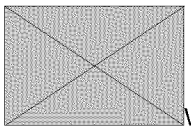
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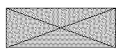
2016 Fiat 500X Crossover To Be Officially Launched On July 4

May 14, 2014 01:58 pm | feedback@highgearmedia.com (John Voelcker)

 While the Chrysler portion of the newly constituted Fiat Chrysler Automobile company moves ahead on its revised product plan, there will be a new Fiat coming soon as well. The long-awaited 2016 Fiat 500X crossover utility vehicle, with available all-wheel drive, will be unveiled on July 4th, according to Fiat--which has released two photos of a...

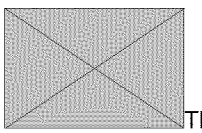
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Tesla Model S: 'Intergalactic SpaceBoat Of Light And Wonder'

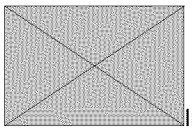
May 14, 2014 11:30 am | feedback@highgearmedia.com (John Voelcker)

 The Tesla Model S electric luxury sedan can be described many ways, and its owners generally use glowing superlatives in doing so. But we've never seen it called an "intergalactic spaceboat of light and wonder" before. Nor an "Electric CruiseBeast," for that matter. ALSO SEE: Next-Generation Tesla Electric Car Won't Be 'Model E' After All But...

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Dual-Carbon Battery: Same Energy Density, Safer, Longer Life Than Lithium-Ion, Says Power Japan Plus

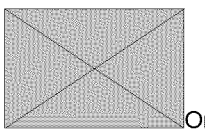
May 13, 2014 08:38 pm | feedback@highgearmedia.com (John Voelcker)

 In the search for better electric-car batteries, lots of lab research has to happen before anything can be announced. Today, a company called Power Japan Plus came out of stealth mode to unveil a new battery chemistry, with both electrodes--anode and cathode--made of carbon. The new cell, known as the Ryden Dual-Carbon Battery, promises energy...

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2015 Volkswagen Golf Launch Edition Priced At Under $19,000

May 13, 2014 06:51 pm | feedback@highgearmedia.com (Stephen Edelstein)

 On sale in Europe for the some time, the seven-generation 2015 Volkswagen Golf is about to hit U.S. showrooms. Volkswagen announced pricing for the 2015 Golf range, which will start under $19,000, but just barely. The company will kick off U.S. Golf sales with a Launch Edition model priced at $18,815, including destination. This model will be sold...

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To: Good, David[good.david@epa.gov]
From: Naoyasu Okawa
Sent: Thur 5/15/2014 12:30:16 PM
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

Thank you for the answer to our questions.

Best Regards,

Nick

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, May 14, 2014 11:50 AM
To: Naoyasu Okawa
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Nick,

You shouldn't need to ask EPA this question. (Other mfrs don't.)

You should go to the Verify data elements on the web Light-Duty Vehicle Data Requirements—Release 13.1 at http://www.epa.gov/otaq/verify/publications.htm. Then look at the IUVP data tab (P1-IT); then in row 39 [IT-31 or In-use Standard (Federal)]you will see that that field (In-use standard for each weighted test result entered) is not a required field (column G is "false"). Also note that there are no business rules specified in Column Y for that field.

So that means that you should be able to enter any weighted result (IT-29) without entering the standard.

If you don't feel like researching it as above, you should go ahead and try entering Methane emissions without entering a standard and see if it is rejected by Verify. If it is, then you can enter the CH4 tesresults in the comment field---and still enter Opt-CREE and an Opt-CREE standard.

Dave

From: Naoyasu Okawa [mailto:nokawa@mazdausa.com]
Sent: Monday, May 12, 2014 11:33 AM
To: Good, David
Cc: David Robertson; Pidgeon, Bill
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

I forgot to follow-up of receiving your answer to my questions (Please see my email below on February, 10). So would you follow-up my questions ?

Best Regards,

Nick

From: Naoyasu Okawa
Sent: Monday, March 17, 2014 3:36 PM
To: 'Good, David'
Cc: David Robertson; Pidgeon, Bill (pidgeon.bill@epa.gov)
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

I am writing to remind you that we asked the below question one month ago. So when you have time please provide your comment or advise to resolve our query.

Please let me know if you have any questions to our question.

Best Regards,

Nick

From: Naoyasu Okawa
Sent: Monday, February 10, 2014 12:52 PM
To: 'Good, David'
Cc: David Robertson
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

Hi Dave,

We look at the update although, the update below requires us to enter CH4 standard but we understand that there would be no CH4 standard if we selected OPT-CREE.

Therefore if we select OPT-CREE, we do not need to enter CH4 standard into Verify and the standard will leave blank, correct ?

Also, will the Verify system accept data submission or accept without considering a failure even CH4 standard leaves blank, correct ?

If leaving blank has any trouble for the data submission please advise us how we should enter CH4 standard when selecting OPT-CREE.

We would like to confirm beforehand if our method where CH4 standard leaves blank would not

cause any issue when submitting data into Verify.

Also, If we should ask this questions to Verify team, please let me know and then I will ask them.

Best Regards,

Nick

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, January 31, 2014 1:37 PM
To: mb-nathan-hinderer ; william.meschievitz@tema.toyota.com; tommy_chang@ahm.honda.com; JRugge@subaru.com; Naoyasu Okawa; dennis.pawlak@na.mitsubishi-motors.com; KhanF@NRD.NISSAN-USA.COM; Tobias Glas; Peace O Uwague; rds116@chrysler.com; ghall12@jaguarlandrover.com; rbarre20@volvocars.com; Beth Borland ; Mark M Poll; christopher.cislo@gm.com; ross.gatzke@porsche.us; balsip@suz.com; Lindsey Jeng
Cc: Dave Barker; peter_meier@ahm.honda.com; tom.beierschmitt@tema.toyota.com; David Robertson; david.patterson@na.mitsubishi-motors.com; yamaday@ntcna.nissan-usa.com; oliver.schmidt@vw.com; Andrea.Antholzner@bmwna.com; vvarjabe@jaguar.com; vvarjabe@jaguarlandrover.com; brian.fitzgerald@daimler.com; gbuffali@volvocars.com; ml90@chrysler.com; tfagerma@ford.com; randall.c.harvey@gm.com; David Geiger; walter.lewis@porsche.us; luis.hernandez@suz.com; Tony D'Ambrosi; Peavyhouse, Robert; French, Roberts; Wehrly, Linc; Wright, DavidA; Snyder, Jim; Ball, Joel; Anderson, Tom; Dalton, Joel; Ott, William
Subject: RE: IUVP - Entering Greenhouse Gas data (CREE or OCREE, CH4) into the EPA Verify database; Verify changes, etc.

To all manufacturers IUVP contacts,

Please note that in Verify Release 13.1 (deployed Jan 24, 2014) that EPA has added two new Test Result/Emission Names which can be used in Verify's IUVP Module only. The new test result/emission names are "Combined CREE" and "Combined OPT-CREE."

Please begin using these IUVP emission names as soon as possible (and don't use the work-around method of entering IUVP combined CREE/OCREE data). [Thanks much for using the "work-around" method of entering combined CREE IUVP data over the past few months.] If you used the "work-around method" of entering CREE/OCREE data, it is not necessary to correct previously entered IUVP data using the new test result/emission names.

Please enter the appropriate Combined CREE or Combined OPT-CREE test results along with the appropriate Combined CREE or Combined OPT-CREE in-use standard, pass/fail results, etc. for the highway test only. As a reminder, individual in-use GHG standards for specific in-use vehicles are required to be included in the manufacturer's final CAFE/GHG model year report, ref. 40 CFR 86.1818-12(d); and 40 CFR 600.512-12(c)(11).

As of the first week in January, 2014, some manufacturers have not been entering CREE/OCREE data and/or CH4 data into Verify for 2012 IUVP tests. In addition, some manufacturers seem to be missing 2012 low mileage IUVP data for some of their 2012 test groups. Please double check on the status of your 2012 IUVP program and let Bill Pidgeon (pidgeon.bill@epa.gov) and I know if your program is running late. I will try to send manufacturers with missing data a follow-up email message in the next few days.

Tips for entering IUVP data:

1. Please enter Combined CREE or Combined OPT-CREE test results (weighted 55% city and 45% highway) for the highway test procedure only.

2. Please do not enter both Combined CREE and Combined OPT-CREE values. Enter either CREE or OPT-CREE values which are consistent with the way you submitted data in your CAFE/GHG model year report for the applicable model year.

3. Please enter CH4 test results, standards, pass/fail results on the FTP test only.

4. Please enter N2O test results, standards, pass/fail results on the FTP test only if you actually measured N2O----e.g. don't enter the default 0.010 N2O values.

Reminders:

1. 2012 IUVP low mileage testing was required to be completed by Dec 31, 2013 and data submitted to EPA's Verify database prior to Jan 31, 2014, ref. 40 CFR 86.1845-04(b)(4) and 86.1847(b). EPA has extended the window in Verify to Feb 28, 2014 for reporting and correcting 2012 model year low mileage IUVP test data. Please contact Bill Pidgeon by email or at 734-214-4416 if you need to submit data to Verify after that date.

2. When entering IUVP data in Verify, please check your Verify mailbox to make sure that the data was accepted by Verify.

Thanks much.

Please call contact me at 734-214-4450 or by email if you have any questions.

Dave

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7
Sent: Thur 5/15/2014 12:46:49 PM
Subject: FW: EPA PHEV / BEV Questions
PHEV_BEV_Question_EPA.pdf

Hello Jim,

The VW Group would like to schedule a meeting (or conference call) with EPA staff and VW certification staff to discuss PHEV and BEV certification. There are still some questions we have regarding PHEV calculations and testing we would like to discuss with you. In advance of the meeting please see the attached presentation with our open points or questions.

Is there a time that works best for you? My proposal is to have the meeting early next week if that is possible for EPA staff. I understand you may want to discuss our questions internally first.

Thank you and best regards,

Ex. 7

To: Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]
From: Wright, DavidA
Sent: Thur 5/15/2014 12:50:46 PM
Subject: RE: Proposed Draft MPG/MPGe Calculation Method added to J3066 Subcommittee Work Area

Jenny,

We have a meeting scheduled for Thursday May 22 from 1 – 3 pm at the EPA office building (2000 Traverwood). The announcement should be sent out by SAE today. I will also send the draft agenda out to all the interested parties later this afternoon.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Sigelko, Jenny (EEO) [mailto:Jenny.Sigelko@vw.com]
Sent: Thursday, May 15, 2014 5:01 AM
To: Wright, DavidA
Subject: RE: Proposed Draft MPG/MPGe Calculation Method added to J3066 Subcommittee Work Area

Good morning David,

Sorry to have missed last week's meeting. Can you please tell me what the next meeting time and location are?

Thanks

Jenny

Jenny Sigelko

Volkswagen Group of America

EEO-Auburn Hills MI

248 754 4214

Jenny.Sigelko@VW.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Wednesday, May 07, 2014 9:44 AM
To: patrick.buller@volvocars.com; Tommy_Chang@ahm.honda.com; chris.mccarthy@gm.com; sconrad@hatci.com; tom.beierschmitt@tema.toyota.com; mky@chrysler.com; dennis.pawlak@na.mitsubishi-motors.com; douglas.reid@na.mitsubishi-motors.com; Paulina, Carl; Chris Nevers; Glodich, Jeffrey (J.M.); William Beggs; drm202@chrysler.com; Sigelko, Jenny (EEO); nokawa@mazdausa.com; mduoba@anl.gov; mark.a.theobald@gm.com; Dalton, Joel; Ellies, Ben; Snyder, Jim
Subject: Proposed Draft MPG/MPGe Calculation Method added to J3066 Subcommittee Work Area

Attached to this e-mail is a copy of the initial draft document with a proposed calculation methodology for MPG/MPGe for the J3066 Standard. Please review this draft and you can begin providing me with comments. We will set the time and location for the next J3066

subcommittee meeting at tomorrow's committee meeting.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

To: Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]
From: Ex. 7
Sent: Thur 5/15/2014 1:11:08 PM
Subject: FW: EPA PHEV / BEV Questions
PHEV_BEV_Question_EPA.pdf

Hello Linc and David,

I just sent this email to Jim asking for a meeting and attaching some PHEV and BEV certification questions. Is it possible to discuss these points next week? Let me know if you have time available and I can set up a meeting.

Thank you and best regards,

Ex. 7

From: Ex. 7
Sent: Thursday, May 15, 2014 8:47 AM
To: Snyder, Jim (Snyder.Jim@epa.gov)
Subject: FW: EPA PHEV / BEV Questions

Hello Jim,

The VW Group would like to schedule a meeting (or conference call) with EPA staff and VW certification staff to discuss PHEV and BEV certification. There are still some questions we have regarding PHEV calculations and testing we would like to discuss with you. In advance of the meeting please see the attached presentation with our open points or questions.

Is there a time that works best for you? My proposal is to have the meeting early next week if that is possible for EPA staff. I understand you may want to discuss our questions internally first.

Thank you and best regards,

Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Allen, Gregory (EEO)
Sent: Thur 5/15/2014 2:11:55 PM
Subject: MY14 Running Change Application EADXJ03.04UG

Hello Jim,

Just an fyi to let you know that a running change application was uploaded to Verify yesterday for the MY2014 Audi EADXJ03.04UG test group to reflect new software and DPF regeneration strategy that effects the upward and downward adjustment factors. In adjacent with this submission, a new KI factor submission letter for MY14 was uploaded for this testgroup as well.

In conjunction with the MY14 submission, a revised Initial MY15 application and subsequent KI factor submission letter were uploaded for the FVGAJ03.0NU4 testgroup for the same topic as mentioned above.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Wehrly, Linc[wehrly.linc@epa.gov]
Cc: French, Roberts[french.roberts@epa.gov]; Ott, William[ott.william@epa.gov]; Good, David[good.david@epa.gov]
From: Wright, DavidA
Sent: Thur 5/15/2014 2:28:39 PM
Subject: FW: EPA PHEV / BEV Questions
PHEV_BEV_Question_EPA.pdf

Linc,

I would like to schedule a meeting with VW on May 28th or 29th. I want to confirm that you will be in the office those days before getting back with VW. Having looked at my schedule and VWs questions I think it would be best to have a full week to work through the details.

Thanks,

David

From: Ex. 7
Sent: Thursday, May 15, 2014 9:11 AM
To: Wehrly, Linc; Wright, DavidA
Subject: FW: EPA PHEV / BEV Questions

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Thank you and best regards,

Ex. 7

To: Wright, DavidA[Wright.DavidA@epa.gov]; Ott, William[ott.william@epa.gov]; Good, David[good.david@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]
From: French, Roberts
Sent: Thur 5/15/2014 2:33:12 PM
Subject: RE: EPA PHEV / BEV Questions

I sent **Ex. 7** my PHEV calculator (maybe one of you already did?). If they dig into that it will answer some of their calculation questions, I think.

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

From: Wright, DavidA
Sent: Thursday, May 15, 2014 10:26 AM
To: French, Roberts; Ott, William; Good, David
Cc: Wehrly, Linc
Subject: FW: EPA PHEV / BEV Questions

I will make arrangements for a meeting with Volkswagen on Thursday. I ask that if you have specific answers to each of the questions you get them to me. Obviously one of their questions if for CARB and we will not have a response to that one.

I will schedule a meeting on Tuesday or Wednesday with Rob, Will, and Dave to review our answers to their questions.

Thanks,

David

From: Ex. 7
Sent: Thursday, May 15, 2014 9:11 AM
To: Wehrly, Linc; Wright, DavidA
Subject: FW: EPA PHEV / BEV Questions

Hello Linc and David,

I just sent this email to Jim asking for a meeting and attaching some PHEV and BEV certification questions. Is it possible to discuss these points next week? Let me know if you have time available and I can set up a meeting.

Thank you and best regards,

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Thank you and best regards,

Ex. 7

.

To: Wright, DavidA[Wright.DavidA@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
Cc: Ott, William[ott.william@epa.gov]; Good, David[good.david@epa.gov]
From: French, Roberts
Sent: Thur 5/15/2014 2:44:43 PM
Subject: RE: EPA PHEV / BEV Questions

Duh, I just looked more closely at the comments. They are about my calculator.

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

From: Wright, DavidA
Sent: Thursday, May 15, 2014 10:29 AM
To: Wehrly, Linc
Cc: French, Roberts; Ott, William; Good, David
Subject: FW: EPA PHEV / BEV Questions

Linc,

I would like to schedule a meeting with VW on May 28th or 29th. I want to confirm that you will be in the office those days before getting back with VW. Having looked at my schedule and VWs questions I think it would be best to have a full week to work through the details.

Thanks,

David

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To: Wehrly, Linc; Wright, DavidA
Subject: FW: EPA PHEV / BEV Questions

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Thank you and best regards,

Ex. 7

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: NVIDIA
Sent: Thur 5/15/2014 7:39:45 PM
Subject: NVIDIA Manufacturing Newsletter

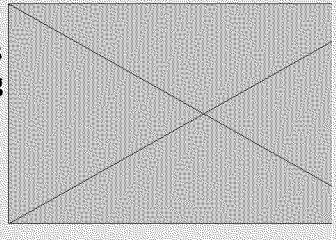
Volume 2, Issue 11 Read Newsletter Online

Thank you for being a part of the NVIDIA Manufacturing community. As one of over 50,000 readers of this newsletter, we value your support and feedback, so please feel free to contact us at manufacturing@nvidia.com. If you're on Twitter, you can follow us at @NVIDIA_MFG.

In this issue:

> Leading Manufacturers Gather at GTC 2014 for the Digital Manufacturing Summit
> Share your NVIDIA Quadro® story
> NVIDIA Sponsors RTT Excite in Munich and Detroit
> Accelerate Your ANSYS Fluent Simulations with NVIDIA GPUs
> Autodesk Launches 2015 Products
> The NVIDIA Ad Design Contest with Morgan Motors Crosses the Finish Line
> Take the NVIDIA GRID™ Test Drive
> Autodesk Wins Innovation Award at Citrix Synergy
> NVIDIA GRID In The News
> Follow NVIDIA Manufacturing Industries on Twitter

Leading Manufacturers Gather at GTC 2014 for the Digital Manufacturing Summit



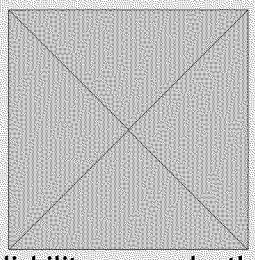
The Digital Manufacturing Summit at the NVIDIA GPU Technology Conference (GTC 2014) took place on March 25 and 26 in San Jose, California. Thousands of attendees from 50 countries gathered to learn from leading manufacturing companies (including Ford Motor Company, Boeing, and apparel company Vans) how they can improve productivity and competitiveness with NVIDIA GPUs. In addition, demos from PSA Peugeot Citroen and Honda showed how NVIDIA graphics cards are the fuel that powers their best work. Watch how Honda leverages NVIDIA Iray® VCA to view photorealistic car exteriors and interiors-even cross sections of vehicles-in real-time.

The Digital Manufacturing Pavilion showcased demos of several cool technologies. Christie Digital's augmented reality projection mapping drew a crowd, while other attendees got hands-on with the NVIDIA GRID, experiencing its ability to enable a rich, 3D CAD experience from the cloud. Leading CAD software firms including Autodesk, Dassault, SOLIDWORKS, and RTT also presented information on their latest products at their booths.

The most exciting demo was Audi's driverless car, powered by the NVIDIA® Tegra® K1, rolling up to NVIDIA CEO Jen-Hsun Huang during his keynote address. You don't see a self-driving car every day. Not yet, at least.

Don’t miss next year’s event! Mark your calendar now for GTC 2015. It will be held April 28 – May 1 in San Jose, California.

Share your NVIDIA Quadro® story



NVIDIA Quadro graphics cards are trusted all over the world, empowering over 80% of design professionals to do their best, most important work across the widest range of applications. Wonder why NVIDIA manufacturing customers say Quadro is their #1 professional graphics card? Visit www.nvidia.com/procad to find out.

Already know why you prefer Quadro for your design work? Is it performance, reliability, or maybe the image quality you get? Share your story of how NVIDIA has empowered your work for a chance to win a Quadro® K2000. Each monthly winner will also receive one complementary conference pass to GTC 2015, NVIDIA s annual GPU Technology event. We’ll select the most compelling story each month through July and feature your company online as an NVIDIA Manufacturing customer success story. Email manufacturing@nvidia.com and tell us why Quadro is your #1.

NVIDIA Sponsors RTT Excite in Munich and Detroit

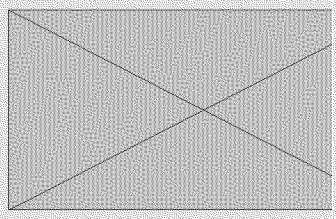
Join us at RTT Excite 2014, an annual industry event in professional 3D visualization, where we will be showcasing NVIDIA® Quadro® GPUs and our new Iray® VCA system. This year’s event in Munich boasts an impressive list of speakers, including Jaguar Land Rover, Honda, Lamborghini, Gulfstream Aero, Vans, Nissan, Coach, PSA Peugeot, and more.

The agenda features a presentation by Phillip Miller, director of advanced rendering products, on the latest Iray technologies for fully scalable remote rendering. He will discuss how RTT’s Bunkspeed products leverage NVIDIA’s Iray® rendering engine to provide performance scaling on the new Iray VCA system, giving users real-time photorealistic rendering with global illumination on their network.

NVIDIA will also sponsor RTT USA in Royal Oak, MI, where many North American users and enterprise clients will see the new RTT visualization center featuring NVIDIA professional graphics systems and GPUs. Attendees will have the opportunity to schedule private tours and meetings to interact with software and hardware solutions related to their digital design, visualization and point-of-sale pipelines.

Learn more about the Munich event May 15-16.
Learn more about the Detroit event June 26-27.

Accelerate Your ANSYS Fluent Simulations with NVIDIA GPUs

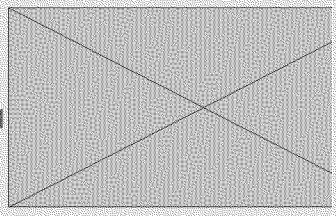


NVIDIA and ANSYS worked collaboratively to deliver higher productivity for your CFD simulations with multi-GPU support in Fluent 15.0. This performance enhancement is the result of innovative GPU-accelerated solvers developed by NVIDIA and a new license scheme in ANSYS 15.0, in which each HPC task unlocks either a GPU socket or a CPU core. Now, by simply adding GPUs to cluster nodes and workstations, you can do more simulations with your existing HPC infrastructure. Learn more.

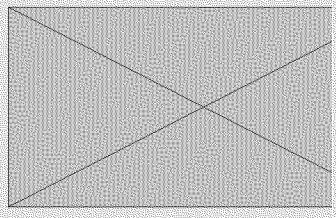
Autodesk Launches 2015 Products

Autodesk recently unveiled the 2015 versions of its popular 3D animation tools, powered by NVIDIA. A key example of the close technical collaboration with NVIDIA is Autodesk's latest Inventor for 3D mechanical design. Inventor allows users to design and validate their products before they are built, reduce development costs, and get to market faster. This promise is further fulfilled by leveraging NVIDIA Quadro® graphics on large assembly performance for a fully interactive design experience with speedups of two to nine times on large, complex models. Learn more.

The NVIDIA Ad Design Contest with Morgan Motors Crosses the Finish Line

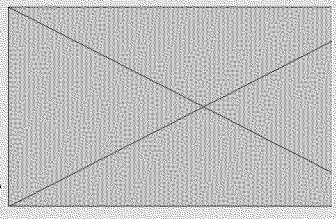


Earlier this year, NVIDIA invited designers and digital artists to create a magazine advertisement rendering for the Morgan Motor Company to help launch their latest 3 Wheeler. Check out some of the creative designs submitted for the contest. Germano Vieira's design was selected as the grand prize winner. Germano won an HP ZBook 17 mobile workstation with NVIDIA Quadro® graphics cards, a feature on Morgan Motor's website and in the official Morgan Motor magazine, plus $5,000 cash and worldwide exposure! .



Follow @NVIDIA_MFG on Twitter for more chances to win graphics hardware from NVIDIA.

Take the NVIDIA GRID™ Test Drive



Take the NVIDIA GRID test drive and experience virtualized graphics acceleration delivered from the cloud, all from the comfort of your PC. Once you start the test drive, you have 24 hours to experience some of your most demanding applications running in the cloud. See how NVIDIA GRID delivers a better experience for remote desktops and applications, runs graphics-rich applications in a virtualized environment, and handles complex graphics files and images. Learn more and take the test drive.

Autodesk Wins Innovation Award at Citrix Synergy

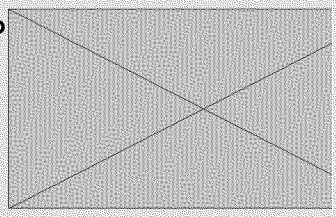
At Citrix Synergy 2014 last week, Autodesk was announced as the winner of Citrix's 9th annual Innovation award, designed to recognize visionary customers who are using Citrix solutions to deliver mobile workspaces to drive business innovation and IT simplicity. Autodesk used Citrix solutions to harness virtualization technology powered by NVIDIA GRID™ graphics to create a new cloud-based CAD development environment for access from anywhere on any device. Learn more.

NVIDIA GRID™ In The News

The Citrix Blog: 15 years of waiting, but now Citrix and NVIDIA are taking us to Mars
The Citrix Blog: Dell R7610 delivering high quality Virtual Workstation solutions with Citrix XenDesktop and NVIDIA on XenServerz
The Citrix Blog: Adobe certify PhotoShop for NVIDIA vGPU and Citrix XenDesktop
Siemens PLM Community: TAI Relies on NVIDIA GRID for VDI Build Out
NVIDIA Blog: Customers, Partners Make NVIDIA GRID the Talk of Citrix Synergy
IBM Blog: Citrix virtualization with NVIDIA GPUs and IBM NeXtScale System, what does it mean?
Arc Advisory Group: Siemens PLM Solutions for Industrial Machinery

Follow NVIDIA Manufacturing Industries on Twitter

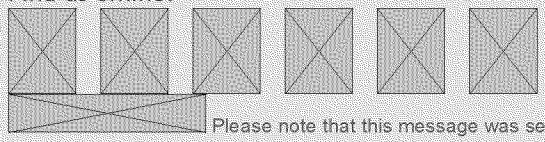
NVIDIA recently launched its manufacturing industries presence on Twitter to share information with manufacturing and AEC companies. Follow @NVIDIA_MFG on Twitter to get the latest information on events, contests, and news from the NVIDIA Manufacturing team. Want to engage with us in-person? Meet the NVIDIA team at these upcoming events around the world:



- RTT Excite, May 15-16 – Munich, Germany
- SIMULIA Community Conference, May 20-22 – Providence, Rhode Island
- ANSYS Convergence Conference, May 22 – Houston, Texas
- ANSYS Convergence Conference, May 23 – Chicago, Illinois
- RTC Australasia, May 26-31 – Melbourne, Australia
- ANSYS Convergence Conference, June 5 – Detroit, Michigan
- LSTC User Conference, June 8-10 – Dearborn, Michigan
- PTC Live Global, June 15-18 – Boston, Massachusetts
- RTC North America, June 19-21 – Chicago, Illinois
- PLM Connection, June 16-19 – Orlando, Florida
- RTT Excite USA, June 26-27 – Royal Oak, Michigan

Check out the latest videos posted to the NVIDIA YouTube channel.

Find us online:



Please note that this message was sent to the following email address: (**pidgeon.bill@epa.gov**)
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If you would like to stop receiving all emails from NVIDIA, click to unsubscribe all.

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All rights reserved. 2701 San Tomas Expressway, Santa Clara, CA 95050.

.

To: Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]; dennis.pawlak@na.mitsubishi-motors.com[dennis.pawlak@na.mitsubishi-motors.com]; William Beggs[william.beggs@gm.com]; nokawa@mazdausa.com[nokawa@mazdausa.com]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]; patrick.buller@volvocars.com[patrick.buller@volvocars.com]; chris.mccarthy@gm.com[chris.mccarthy@gm.com]; sconrad@hatci.com[sconrad@hatci.com]; tom.beierschmitt@tema.toyota.com[tom.beierschmitt@tema.toyota.com]; mky@chrysler.com[mky@chrysler.com]; douglas.reid@na.mitsubishi-motors.com[douglas.reid@na.mitsubishi-motors.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; drm202@chrysler.com[drm202@chrysler.com]; Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]; mduoba@anl.gov[mduoba@anl.gov]; mark.a.theobald@gm.com[mark.a.theobald@gm.com]; Dalton, Joel[Dalton.Joel@epa.gov]; Ellies, Ben[ellies.ben@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Alson, Jeff[alson.jeff@epa.gov]
Cc: Roxanne Loeffler[rloeffler@sae.org]
From: Wright, DavidA
Sent: Thur 5/15/2014 8:00:27 PM
Subject: J3066 Task Force May 22 Meeting Notice and Agenda
Meeting Notice 05 22 2014 LDVPM[1].docx
Agenda J3066 Task Force 5 22 2014.docx

Attached are the meeting notice and agenda for the next meeting of the J3066 Task Force. The initial proposed draft MPG/MPGe calculation method can be found on the task force web page http://www.sae.org/servlets/works/postDiscussion.do?comtID=TEVLDVPM&docID=J3066&inputPage=showA

Let me know if you are unable to access the task force web page and I can provide you a copy of the draft. Also, let me know if you have any questions or comments regarding the next meeting or the current draft.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

J3066 Task Force - On-Board Fuel Consumption Measurement & Reporting Standard
May 22, 2014
1:00 pm – 3:00 pm EDT
Location: EPA Office of Transportation & Air Quality
2000 Traverwood Drive, Ann Arbor, MI 48105 (Office Building)
WebEx/Teleconference Available

WebEx Meeting Information

Contact: R. Loeffler rloeffler@sae.org (248) 273-2457

To add this meeting to your calendar program (for example Microsoft Outlook), click this link:
https://sae.webex.com/sae/j.php?MTID=m6b6fb5356571c99b303a9138c4c77f6a

Topic: J3066 Task Force Meeting-On-Board Fuel Consumption Measurement Reporting Standard
Date: Thursday, May 22, 2014
Time: 1:00 pm, Eastern Daylight Time (New York, GMT-04:00)
Meeting Number: 653 660 498
Meeting Password: [redacted]

To join the online meeting (Now from mobile devices!)
---
1. Go to https://sae.webex.com/sae/j.php?MTID=m1e8f26cac778548ba0f0646ad73f24ae
2. If requested, enter your name and email address.
3. If a password is required, enter the meeting password: [redacted]
4. Click "Join".

To view in other time zones or languages, please click the link:
https://sae.webex.com/sae/j.php?MTID=mcc0ca00bf169c880d2fa0383a718a7bf

---
To join the audio conference only

Call-in toll-free number (US/Canada): 1-866-469-3239
Call-in toll number (US/Canada): 1-650-429-3300
Global call-in numbers: https://sae.webex.com/sae/globalcallin.php?serviceType=MC&ED=236898917&tollFree=1
Toll-free dialing restrictions: http://www.webex.com/pdf/tollfree_restrictions.pdf

Access code:[redacted]

For assistance
---
1. Go to https://sae.webex.com/sae/mc
2. On the left navigation bar, click "Support".

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AGENDA

Light-Duty Vehicle Performance Measurement Standards Committee, J3066 Task Force
Chair – J. Glodich
Secretary – N. Yuhase
Thursday, May 22nd, 2014
1:00-3:00 PM EDT
EPA Office of Transportation and Air Quality, 2000 Traverwood Drive, Ann Arbor 48105
(Office Building)

1. Welcome and Introductions

2. Review of the Minutes from Last Meeting (April 4, 2014)

3. Membership Review

4. Document Review

J3066: "On-Board Fuel Consumption and Measurement Reporting Standard"

- Sponsor: D. Wright
- Review Proposed Draft MPG/MPGe Calculation Method
- Distance travelled methodology (Do any relevant SAE standards exist)
- Liquid dedicated fuel calculation methodology (Diesel, Gasoline, E85, M85)
- Gaseous dedicated fuel calculation methodology (CNG, LPG, Hydrogen)
- Electricity dedicated fuel calculation methodology (Electricity)
- Calculation method for vehicles using more than one fuel (E85 Flexible Fuel Vehicles, Gasoline/CNG, Gasoline/LPG, Diesel/CNG, Plug-In Hybrid Electric Vehicles using Electricity and Liquid Fuel, others?)
- Evaluating the accuracy of the proposed calculation methodology (Basis for the accuracy determination – replicate regulated test MPG value; or, compare calculation to on-road fuel consumption procedure, SAE J1082 – Fuel Economy Measurement Road Procedure).
- Drive Quality Metric
- Current methods (ECO telltales) used to inform driver behavior.
- Draft J3066 Standard Text

5. Next Meeting

- June 19, 2014 (proposed)

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To: French, Roberts[french.roberts@epa.gov]
Cc: Wright, DavidA[Wright.DavidA@epa.gov]
From: Ex. 7
Sent: Fri 5/16/2014 11:59:07 AM
Subject: RE: PHEV calculator

Hello Rob,

Thanks you for the clarification. I've sent your answer over to my German colleagues and asked if this is now helps them understand the issue. In the meantime I am still hoping we can have a discussion sometime next week.

Thanks again,

Ex. 7

From: French, Roberts [mailto:french.roberts@epa.gov]
Sent: Thursday, May 15, 2014 11:25 AM
To: Ex. 7
Cc: Wright, DavidA
Subject: RE: PHEV calculator

Ex. 7

With regard to the first page of your questions/comments, I think you'll find that the calculator does the things on both sides of the page.

CAFE and GHG values, and the utilitized MPGe/GHG values for the label (not actually on the label, but used to determine MPG/GHG ratings), are done using the "stepwise" utility factor approach shown on the right side of the page. This is consistent with J1711. What is shown in the box on that page is a utilitized charge-depleting value, and thus not appropriate for label use to represent charge-depleting operation.

J1711 doesn't really inform us completely as to how to determine ONLY a charge-depleting value, which we need to do for the label. Hence the calculations shown on the left side of your page.

When we discuss PHEV calculations we definitely need to be specific as to whether we are talking about label, CAFE, or GHG, since there are differences in methodology.

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

From: [Ex. 7 @vw.com]
Sent: Thursday, May 15, 2014 11:03 AM
To: French, Roberts
Subject: RE: PHEV calculator

Hello Rob,

No problem. I've asked my team to make sure they review the PHEV calculator you recently shared.

Thanks,

Ex. 7

From: French, Roberts [mailto:french.roberts@epa.gov]
Sent: Thursday, May 15, 2014 10:57 AM
To: Ex. 7
Subject: PHEV calculator

Ex. 7

Sorry for the multiple emails. I just looked at your Powerpoint and I see that some of your questions are about my calculator!

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Fri 5/16/2014 7:26:04 PM
Subject: RE: BEV and the Guide
2014 generic EV Label calculations-1-18-13.xlsm
EV Verify Rel 9and10-Charge Depleting example data.8-9-2012.pdf

Richard,

Attached are some EV templates for calculating FE Label values, entering CD data into Verify, etc.

For CAFE calcs, I think Bob Peavyhouse uses the CD range and the recharge energy to determine the CAFE energy consumption---e.g. values from the city & hwy EV test data which manufacturers enter into Verify (my example data).

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Friday, May 09, 2014 9:18 AM
To: Good, David
Subject: BEV and the Guide

Hi Dave;

When you are back in the office on Monday or Tuesday, can we talk about BEV and the information needed for Verify and the fuel economy labeling program? This is our first BEV and I am not up to speed on data needed for the program. Please give me a call when you can discuss.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

Derived 5-cycle MPG Calculations For Electric Vehicles

Please Enter:

Model Year: 2014

Manufacturer Name: xxxxxxx

Model Name yyyyyyyy

Test Date: xx/yy/2013

Values in Yellow fill are used on FE Labels (window stickers)

I. Calculate Electric vehicle FE Label city, Hwy, Combined FE values using the 2008 (derived 5-cycle) method and the 30% cap method:

Enter unadjusted unrounded kW-hr/100mi Values (in red text blocks) as determined from SAE J1634:

		City (round mpg to 0.1mpg)	Highway (round mpg to 0.1mpg)	Calculated unadjusted combined	Units
Elect veh FE	unrounded kW-hr/100 mi	19.3900	25.3000	22.0495	kW-hr/100 mi
Elect veh FE	converted to mpg	**173.8**	**133.2**	152.8366	mpg

2008 FE Label method (Derived 5-cycle)

	Derived 5-cycle City	Derived 5-cycle Hwy	Adjusted Combined	Units
Calculate derived 5-cycle mpg:	**99.5**	**87.1**	**93.5**	mpg
convert back to kW-hr/100 mi:	**33.9**	**38.7**	**36.0**	**kW-hr/100 mi Derived 5-cycle**
Percent adjustment mpg:	**42.8%**	**34.6%**	**38.8%**	percent
MPG w/ 30% Cap	121.7	93.2	106.9856	MPGe with 30 % Cap
convert back to kW-hr/100 mi:	27.7043	36.1486	31.5042	kW-hr/100 mi w/30 % Cap
			31.5	
2014 Label Values:				
Rounded MPG w/30% cap:	122	93	107	
Rounded kW=hr/100 mi:	28	36	32	

II. Calculate Electric vehicle driving ranges using the unadjusted SAE J1634 method and the 2008 (derived 5-cycle) method:

Enter unadjusted City & Hwy Range Values in miles (in red text blocks) as determined from SAE J1634:

	City Range	Hwy Range	Combined Range	Rounded Range	Units	Method:
Calculate unadjusted driving range:	111.293	89.42	101.4502	101	miles	Unadjusted (SAE J1634)
Calculate adjusted driving range (2008 method, No Cap):	63.7	58.5	62.0636	62	miles	2008 (derived 5-cycle, mpg-based, No Cap)
Calculate adjusted driving range (2008 method, 30% Cap):	77.9	62.6	71.0151	71	miles	2008 (derived 5-cycle, mpg-based, 30% Cap)

III. Calculate Electric vehicle annual fuel cost and 5-year savings, per 40 CFR 600.311-12(e)

2008 MPG Factors:

ref. 40 CFR 600.210-08

City Intercept:	0.00326
City Slope:	1.1805
Hwy Intercept:	0.00138
Hwy Slope:	1.3466

Petroleum Equivalency Factor for electricity; ref 10 CFR 474.3

33,705 watt-hr/gallon w/o 6.667 CAFE incentive no fuel fired accessories

Enter Average 2014 5-year Fuel Cost: $11,500

Enter U.S. electricity costs: $0.12 per kw-hr (from CD-12-18 for 2014)

Calculate unrounded adjusted combined miles/kw-hr: 3.17418 mi/kw-hr

Annual Miles	Cost	Units	Unrounded Annual Fuel Cost*	Method	2014 Label Rounded Annual Fuel Cost	2014 Label 5-year Amount You Save:
15,000	$0.12	per kw-hr	$648.00	2008 (derived 5-cycle, mpg-based, No Cap)	$650.00	$8,250
15,000	$0.12	per kw-hr	$567.08	2008 (derived 5-cycle, mpg-based, 30% Cap)	$550.00	$8,750

*Note: Annual fuel costs should be ASTM rounded to the nearest $50.

Example - Charge Depleting Data for an Electric Vehicle

U.S. Environmental Protection Agency

Verify: Engine and Vehicle Compliance System

Welcome, David Good. Today is Monday, November 28, 2011 (ET)

Test Information Details

Test Information | EPA Tab

General Information

Process Code	Correction Submission	Mfr Code	MTX - Mitsubishi Motors Corporation
Test Number	CMTX10016275	Exhaust Evap Test Number Link	
Vehicle ID / Configuration	EB12-EM21 / 0	Test Date	2011-06-15

EPA Only Fields

Dataset Status	Active	Submission Date	11/21/2011
Test Category	Charge Depleting	LOD Test Number	
EPA Dyno Number		Test 5-Cycle Category	Not 5-Cycle

Test Particulars

Test Procedure	81 - Charge Depleting UDDS	Test Fuel Type	62 - Electricity
Verify Test Lab ID	1	Odometer Units	M
Test Start Odometer Reading	300	4WD Test Dyno	No
State of Charge Delta Indicator	No		
Fuel Batch Mfr Code	MTX	Fuel Batch ID	MOKZEV
Fuel Batch Calibration Number	1101	Diesel Adjustment Factor Usage	Downward
Retest Indicator	No	Retest Reason	N/A
Verify Test Number That Was Retested		Manufacturer Confirmatory Test?	No
Original Manufacturer Verify-Test Number That Was Confirmed			

Analytically-Derived FE / CREE

Analytically Derived?	No	ADFE Base Verify Test Number	
ADFE Total Road Load Horsepower	N/A	ADFE ETW	N/A
ADFE N/V Ratio	N/A		

Please enter (Unadjusted test data.)

PHEV/Charge Depleting Test Information

Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	18.3012
Charge Depleting Range (Calculated miles)	97.935	Charge Depleting Range (Actual miles)	97.935
Equivalent All Electric Range (miles)	97.935	Number of Charge Depleting Bags / Phases Conducted	1
Fuel Economy Value Units	miles per gallon		

Please be sure to enter units of mpg

Test Results

UDDS/Highway/US06 Bag/Phase Number 1

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	97.935	–
AMP-HRS (Integrated Amp-hours)	0	–
AS-VOLT (Average System Voltage)	0	–
CO (Carbon Monoxide)	0	–
CO2 (Carbon dioxide)	0	–
CREE (Carbon-Related Exhaust Emissions)	0	–
END-SOC (System End State of Charge	0	–

Amp ~~Watt~~-hours)		
HC-TOTAL (Total Hydrocarbon)	0	
MFR FE (Manufacturer Fuel Economy)	180.4	180.4
NOX (Nitrogen Oxide)	0	
START-SOC (System Start State of Charge Amp ~~Watt~~-hours)	0	

Note: Verify doesn't perform this calculation. Verify currently defaults to the mfr's value

Verify-Calculated Fields

System Miles 289

Fuel Economy

Unrounded Unadjusted Fuel Economy	--	Rounded Unadjusted Fuel Economy	--
Unrounded Adjusted Fuel Economy	--	Rounded Adjusted Fuel Economy	--

CREE / OPT-CREE

Unrounded Unadjusted CREE	--	Rounded Unadjusted CREE	--
Unrounded Adjusted CREE	--	Rounded Adjusted CREE	--
Unrounded Unadjusted OPT-CREE	--	Rounded Unadjusted OPT-CREE	--
Unrounded Adjusted OPT-CREE	--	Rounded Adjusted OPT-CREE	--

Manufacturer Test Comments

This is official EPA confirmatory data. (Temporarily, inputted by Mfr.) UDDS AER(mile):97.935 , AC Energy(kWh/100mile):18.6705

View Related Confirmatory Test Decision Information

$$\text{MFR FE} = \frac{33{,}705\ \left(\frac{\text{kW-hr}}{\text{gal}}\right) \times \text{charge depleting range (miles)}}{\text{Recharge Event Energy (kW-hr)}}$$

ASTM Round to tenths
(units are MPGe)

U.S. Environmental Protection Agency

Verify: Engine and Vehicle Compliance System

Fuel Properties Details

General Information

Mfr Code	MTX	Fuel Batch Id	MOKZEV
Submission Date	11/20/2011		
Fuel Calibration Number	1101	Test Fuel Type	62 - Electricity
Fuel Batch Calibration Effective Date	2011-05-23	Fuel Batch Calibration Ineffective Date	
Fuel Batch Calibration Date	2011-03-01		
Carbon Weight Fraction NMHC		Carbon Weight Fraction HC	
Exhaust Carbon Weight Fraction			
Fuel Methanol Volume Fraction		Fuel Density	
Fuel Specific Gravity		Fuel Net Heating Value	
Fuel Blend Carbon Weight Fraction		Weight Fraction CO2	

View Related Test Datasets

To: Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Ex. 7 Ex. 7 Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Joerg Launer (Jorg.Launer@vw.com)[Jorg.Launer@vw.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]
Cc: catherine.kim@daimler.com[catherine.kim@daimler.com]; Kaori Alarid (kaori.alarid@tema.toyota.com)[kaori.alarid@tema.toyota.com]; Ex. 7 Ex. 7 Melanie Hobenshield (melanie.hobenshield@afcc-auto.com)[melanie.hobenshield@afcc-auto.com]; Pat Fritschi (pf38@chrysler.com)[pf38@chrysler.com]; Pat Krayser[pkrayser@aqmd.gov]; Ex. 7 Ex. 7 Arwed Niestroj (arwed.niestroj@daimler.com)[arwed.niestroj@daimler.com]; Bill Elrick[belrick@CAFCP.org]; Bob Cassidy (robert.cassidy@nissan-usa.com)[robert.cassidy@nissan-usa.com]; Brandi Gonzales[bgonzales@CAFCP.org]; Grundler, Christopher[grundler.christopher@epa.gov]; Chris White[cwhite@CAFCP.org]; Dean Kato (dean@intereco.com)[dean@intereco.com]; Ex. 7 Frank Seyfried (frank.seyfried@volkswagen.de)[frank.seyfried@volkswagen.de]; Ex. 7 Ex. 7 Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Juergen Friedrich (juergen.friedrich@daimler.com)[juergen.friedrich@daimler.com]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kiho Yoo (k.u@hyundai-motor.com)[k.u@hyundai-motor.com]; Linda Carrizosa[lcarrizosa@cafcp.org]; Lisa Mirisola (lmirisola@aqmd.gov)[lmirisola@aqmd.gov]; Mark S. Torigian Esq (Mtorigian@hatci.com)[Mtorigian@hatci.com]; Matt McClory (matt.mcclory@tema.toyota.com)[matt.mcclory@tema.toyota.com]; Matthew Forrest (matthew.forrest@daimler.com)[matthew.forrest@daimler.com]; Randy Roesser (Randy.Roesser@energy.ca.gov)[Randy.Roesser@energy.ca.gov]; Wysor, Tad[wysor.tad@epa.gov]; Takehito Yokoo (takehito.yokoo@tema.toyota.com)[takehito.yokoo@tema.toyota.com]; Tiger Jeong (tigerjeong@hyundai.com)[tigerjeong@hyundai.com]; Tim Olson (tolson@energy.state.ca.us)[tolson@energy.state.ca.us]; William Craven (william.b.craven@daimler.com)[william.b.craven@daimler.com]
From: Linda Carrizosa
Sent: Fri 5/16/2014 10:16:58 PM
Subject: Submitted to Gov's Office: CaFCP member comments Draft ZEV Action Plan Addendum

Dear CaFCP members,

We have submitted CaFCP member comments on the Draft ZEV Action Plan Addendum to the Governor's Office. You can find the comments at http://cafcpmembers.org/membersonly/st_phone_05022014.

Please let me know if you have any questions.

Thank you,

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 5/19/2014 1:46:47 PM
Subject: RE: BEV and the Guide

Thank you Dave, this will help.

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, May 16, 2014 3:26 PM
To: Thomas, Richard (EEO)
Subject: RE: BEV and the Guide

Richard,

Attached are some EV templates for calculating FE Label values, entering CD data into Verify, etc.

For CAFE calcs, I think Bob Peavyhouse uses the CD range and the recharge energy to determine the CAFE energy consumption---e.g. values from the city & hwy EV test data which manufacturers enter into Verify (my example data).

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Sent: Friday, May 09, 2014 9:18 AM
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Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

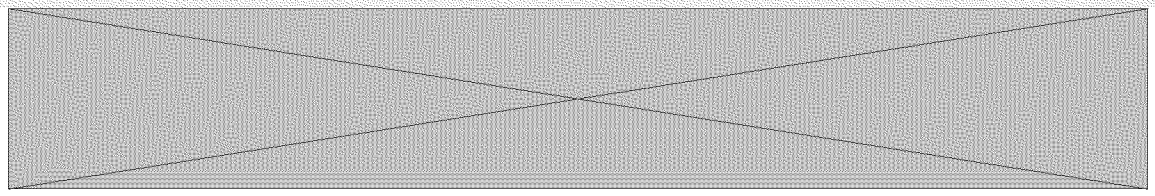
Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

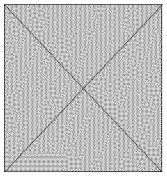
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Mon 5/19/2014 4:04:03 PM
Subject: Green Car Report Daily Headlines

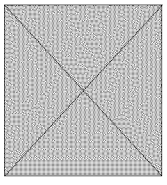
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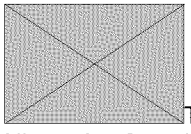
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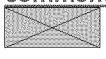


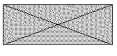
2014 Nissan Leaf Recall, Flex-Fuel Brazilian VW, Quickest Electric Cars: Today's Car News

May 19, 2014 03:25 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: A 2014 Nissan Leaf recall that could see a few owners get new cars, we drive entirely on ethanol in Brazil's flex-fuel Volkswagen Gol, and electric cars for speed freaks. All this and more on Green Car Reports. Teams received their electric race cars as the start of the inaugural Formula E season draws closer...

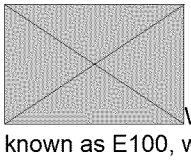
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Driving Entirely On Ethanol: Brazil's Volkswagen Gol Flex-Fuel Vehicle

May 19, 2014 03:14 pm | feedback@highgearmedia.com (John Voelcker)

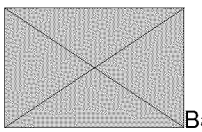
 What's it like to drive on pure ethanol, known as E100, without a drop of gasoline in the car? In the case of the Brazilian Volkswagen Gol, it's quite unremarkable. Brazil's most popular small car for 27 years starts, performs, and otherwise behaves just like a gasoline-

fueled car—except that it's burning pure ethanol...

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Tour Of Ford's 'Green' Truck Plant To Be Updated

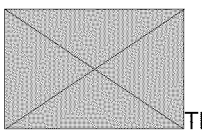
May 19, 2014 03:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Back in 2011, we visited 'Rouge'--the Ford plant responsible for churning out F-150 pickup trucks in their tens of thousands each year. Alongside the F-150 itself, now more efficient than ever, Rouge is an example of how automotive facilities are being cleaned up, as well as the products they produce. Rouge is also a popular tourist attraction in...

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Bad News: Mitsubishi Outlander Plug-In Hybrid Delayed Yet Again

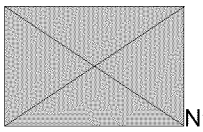
May 19, 2014 02:19 pm | feedback@highgearmedia.com (Antony Ingram)

 Those of you holding out for Mitsubishi's Outlander Plug-In Hybrid will have to hold out even longer--as the car's U.S. launch has been put back once again. The Outlander PHEV is already on sale in Europe, Australia and New Zealand, and has been on the market in Japan for over a year, but a series of small problems has seen its U.S. debut pushed...

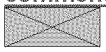
comments | read more

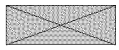
2014 Nissan Leaf Recall: If Welds Missing, Car Will Be Replaced

May 19, 2014 01:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Nissan has announced the recall of a number of 2014 model year Leaf electric cars, regarding a front structural member assembly. According to the recall report, the front structural member on affected vehicles may be missing welds, affecting its structural integrity in a crash, in turn increasing the risk of injury to the vehicle's occupants. MUST...

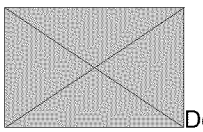
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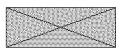
Electric Cars For Speed Freaks: Which One Is Quickest?

May 19, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Debate still rages on the best way to sell electric cars. Should automakers be boasting of their environmental credentials? Or should they talk in a language people understand--money--and highlight the economic benefits? Maybe it's all about silence and refinement? Rarely mentioned is just how fun electric cars can be to drive. So we've taken a...

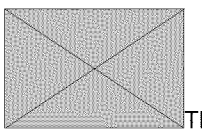
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Success Or Bust For Fisker's New Chinese Owner

May 19, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 Throwing money at a problem won't necessarily make it go away, but it might put you in a position to do something about it. That's essentially the method Fisker's new Chinese owners Wanxiang Group is taking to revive the once-bankrupt electric automaker--and the stakes are high. "I'll burn as much cash as it takes to succeed," Wanxiang...

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To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 5/19/2014 8:10:01 PM
Subject: Decision Information Uploaded to Verify

Hello David,

Two confirmatory test decisions were uploaded to Verify for the MY2015 Volkswagen Jetta 2.0 MPI (Automatic and Manual), Testgroup: FVGAV02.0VUC. The Vehicle ID's are listed below.

Automatic: VW361-0-0250

Manual: VW361-0-0221

There was also some information that I uploaded by mistake for Vehicle ID: VW361-0-221. You can disregard this test data and decision information as this is the wrong Vehicle ID. Unfortunately I was finishing up and filing the documents when I noticed the discrepancy.

My apologies for any inconvenience this may cause.

Regards,

Greg Allen

VWGoA EEO

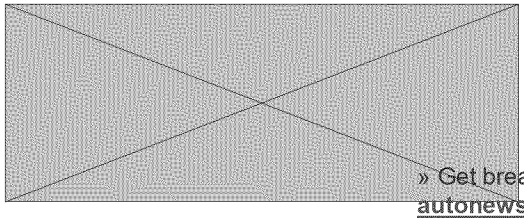
(248)754-4209

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 5/19/2014 8:36:44 PM
Subject: DAILY: Outsiders push the new GM into recalls of old GM products | Japanese collaborate on r&d for new engines | Windshield fluid linked to Legionnaires' disease | Cervone rejoins GM | Hinrichs Q&A

Today's most read story

Low-profile GMC flying high

May 19, 2014



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TOP NEWS

THE GM RECALL

Outsiders push the new GM into recalls of old GM products

11:31 am U.S. ET | May 19

The biggest crisis for the new General Motors might still be a secret buried in the debris of old GM, if not for persistent digging by a Georgia lawyer, a Mississippi auto mechanic and a Florida engineer. ... » READ

Japanese collaborate on r&d for new fuel efficient engines

8:55 am U.S. ET | May 19

Japan's automakers, aiming to take the lead in fuel-efficient powertrains, have joined forces in a new consortium to develop the next generation of fuel-sipping combustion engines. Their goal: A 30 percent improvement in the fuel efficiency of traditional gasoline and diesel engines by 2020. ... » READ

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General Motors Featured at the TLS Auto Social Media Summit

Evolution of Social Media Customer Care - Melody Blumenschein, Social Media Manager - Customer & Relationship Services will summarize the evolution of the GM Social Media Customer Care program and its success improving the customer experience, including GM's focus on the "Voice of the Customer" and specific online listening and engagement initiatives.

Save 25% - Register by 5/19! For more info visit www.tlsummits.com.

Windshield washer fluid linked to deadly Legionnaires' disease

6:39 am U.S. ET | May 19

Windshield washer fluid may be a breeding ground for bacteria that causes the deadly pneumonia known as Legionnaires' disease. ... » READ

VW's Tony Cervone to rejoin GM as head of global communications

UPDATED: 5/19/14 12:01 pm ET - adds Cervone comment

10:19 am U.S. ET | May 19

General Motors, in the thick of a recall crisis that prompted a $35 million fine from the federal government last week, said today that it rehired public-relations executive Tony Cervone, who served as one of GM's top spokesmen as the company veered toward bankruptcy.

... » READ

THE GM RECALL

GM legal department under scrutiny in company's recall probe, report says

9:12 pm U.S. ET | May 18

General Motors' legal department is the focus of an internal inquiry into how the company handled a vehicle safety defect linked to 13 deaths, the New York Times reported, citing two people with knowledge of the inquiry. ... » READ

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Porsche sued over 'Fast and Furious' actor Paul Walker's fatal crash

GM recalls 2.7 million U.S. vehicles for issues including brake lights, brakes, wipers

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High-flying Subaru to add models, capacity

Will Chevy's ad breakthrough lead to more spots targeting LGBT consumers?

GM warned engineers to avoid 'defect,' 'widow-maker,' other inflammatory words, documents show

5:00 pm U.S. ET | May 16

Hinrichs wants better quality, smooth launches

12:01 am U.S. ET | May 19

JCI divests control of interiors business to China's Yanfeng with joint venture

UPDATED: 5/19/14 2:50 pm ET - adds photo, link

9:00 am U.S. ET | May 18

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» June 3 - Rising Stars

» June 4 - ANE Congress

» Sept. 23 - NY Marketing Seminar

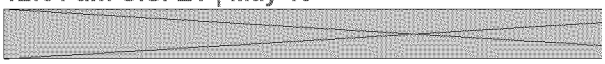
» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

» June 12 - Group Vehicle Redistribution by FirstLook

A VW Microbus on the way?

12:01 am U.S. ET | May 19



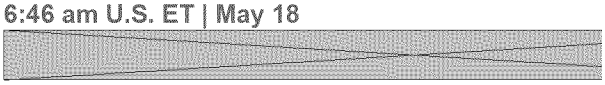
Mercedes drops proposal for subcompacts

5:20 am U.S. ET | May 19



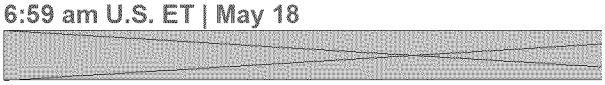
BMW to unveil plans for first Mexico assembly plant in July

6:46 am U.S. ET | May 18



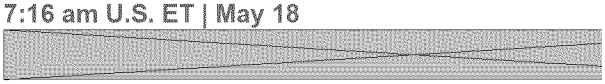
Hyundai recalls more than 140,000 Tucsons to secure air bag assembly

6:59 am U.S. ET | May 18



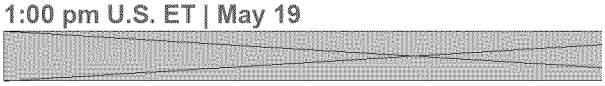
NHTSA upgrades Kia Sorento sunroof probe

7:16 am U.S. ET | May 18



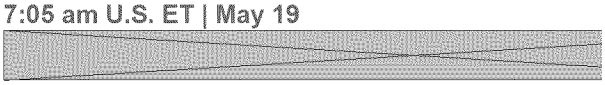
Ford's new F-150 prompts renovation of assembly plant tour

1:00 pm U.S. ET | May 19



Fisker boss will 'burn as much cash as it takes' as it takes on Tesla

7:05 am U.S. ET | May 19



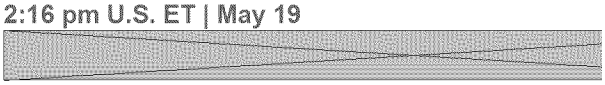
JLR taps Schaeffler's fuel-saving valve system, sources say

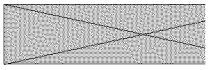
12:01 am U.S. ET | May 19



TRW names head of global communications

2:16 pm U.S. ET | May 19



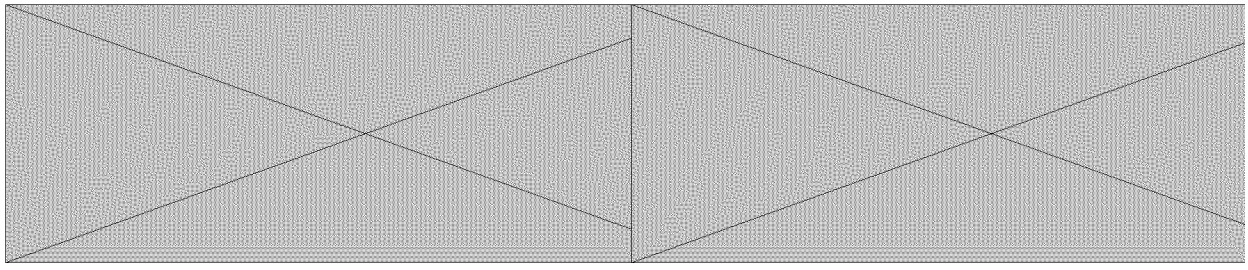


UPCOMING WEBINARS

» May 21 - Building a Profitable Relationship with Your Local Credit Unions

» June 18 - Third-Party Sites and Online F&I

» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 @vw.com]; Ex. 7 Ex. 7 @vw.com]
From: Ex. 7
Sent: Tue 5/20/2014 9:37:57 PM
Subject: RE: Quick review of FVGAV02.0VBD

Hello David:

We will look into these questions and get back to you as soon as possible.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phon

Cell:

E-Ma

Ex. 7

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Tuesday, May 20, 2014 4:24 PM
To: Ex. 7
Cc: Snyder, Jim
Subject: Quick review of FVGAV02.0VBD

Ex. 7

I am contacting you as I am not sure who the appropriate VW contact would be with respect to the application for test group FVGAV02.0VBD. I have taken a quick look at the common (December 5, 2013 document) and test group applications and have not been able to locate information describing either the durability test group or the evaporative emission families. Also the OBDII approval letter included with the application is from a 2014 OBD test group, there does not appear to be an official approval of the 2015 OBD test group included in the application.

Lastly, two of the VECI label examples list the OBD as F II while the third OBD label includes the more detailed acronym Fed II. Not sure if this is of any significance, but, thought I would mention it since I noticed the difference.

Let me know if you have any questions or comments. I look forward to hearing VWs response with respect to the issues raised.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

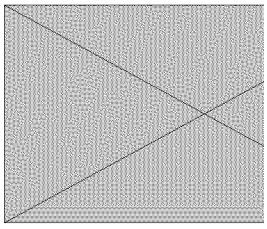
E-mail: wright.davida@epa.gov

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 5/21/2014 8:00:28 AM
Subject: Race Day Will Never Be the Same

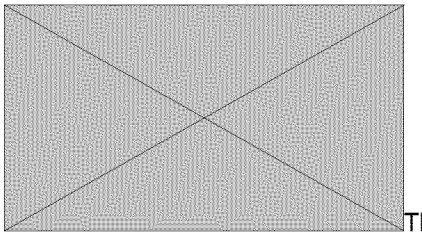
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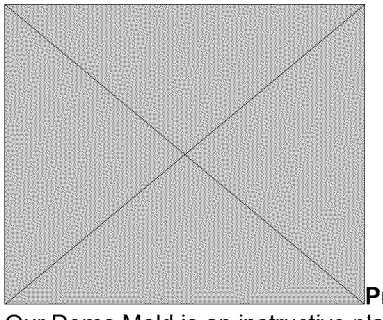
Carbon Fiber Production Simple But Complex



The physical footprint of manufacturing lines is small. However, the carbon-fiber precursor material is delicate and must be handled with care and precision.

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Protomold Demo Mold
Our Demo Mold is an instructive plastic model that shows the injection-molding mechanics behind the production of parts. See how the A and B sides of a mold interact with ejector pins, side-actions, gates, runners and other design features to create the prototypes that product designers and engineers see every day. Order a free Demo Mold now.

Gallery: BMW SGL Carbon Fiber JV Moses Lake

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WHITEPAPER

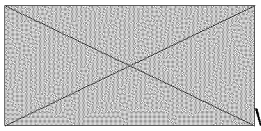
This white paper details how to anticipate and mitigate the risks of potential supply chain disruptions. Using five out-of-the-ordinary scenarios, it describes what can be done to prepare for disruptions and how to mitigate their effects after the event.

Download "Supply Chain Management: What You Don't See Can Hurt You" Whitepaper Now!

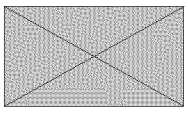
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost

BMW and supplier SGL offer a peak into their carbon-fiber production process in Moses Lake, WA.

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 Where else can you meet the minds that are moving manufacturing forward? Nowhere but IMTS 2014. With a focus on success through cooperation, the week will be filled with technology, education, and ideas that we can all benefit from. It's happening September 8–13 at McCormick Place Chicago. So come together and leave smarter. Register now or learn more at IMTS.com.

Autoline Daily

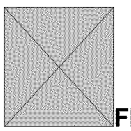
 New Head of GM PR; Indy EV Car-Sharing Program; Conspiracy Theory Debunked

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The race to 54.5 mpg by 2025 is on.

ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

GM and NHTSA Need to Dig Deeper

 **FINAL INSPECTION BLOG**
I'm not convinced throwing more money at a government agency will fix anything.

FULL ARTICLE

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Supply Chain Management: What You Don't See Can Hurt You

The Japanese earthquake and subsequent tsunami of May 2011 underscored the fragility of the worldwide automotive supply chain. The disasters temporarily closed plants that produced 17 of the top 20 models of Japanese vehicles sold in the U.S. and prompted General Motors to close a plant in Louisiana and a Peugeot plant in Europe, according to a Congressional Research Service study. Learn More

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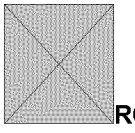
Digital Magazine

Connectivity Demand Growing With Chinese Car Market

Connectivity isn't limited to luxury models; Chinese at all income levels want better interfaces, more services and more data. "Everyone has a digital lifestyle," market researcher Thilo Koslowski says.

FULL ARTICLE

Race Day Will Never Be the Same

 **ROAD AHEAD BLOG**
Why is all this high-performance stuff relevant to an automaker that also markets EVs and hybrids and must get serious about meeting onerous fuel-economy standards? Because motorsports enthusiasts buy cars and become ambassadors for their favorite brands.

FULL ARTICLE

Gallery: Ford Performance Event in Charlotte, NC

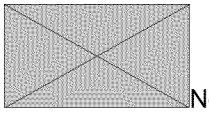
Ford and its partners in grime – Penske Racing, Roush Fenway Racing and Roush Yates Engine – hosted journalists for a motorsports deep-dive at Charlotte Motor Speedway.

Kia U.S. Wants GT4 Stinger in Production

Features of the model include a 2.0L turbocharged and direct-injected 4-cyl. engine making 315 hp, a close-ratio 6-speed manual transmission and Pirelli 20-in. P-Zero tires.

FULL ARTICLE

Test Drive: After Years of Ferrying VIPs, Cadillac Escalade Finally Arrives

 Nowhere is the transformation more apparent than inside. A person could step out of any one of the latest Cadillacs and into the Escalade and know they all come from the same lineage.

FULL ARTICLE

Gallery: '15 Cadillac Escalade

Cadillac Escalade redesign focuses on interior refinement, exterior elegance, powerful but efficient V-8 engine.

Advanced Safety, Creature Features Story of New Hyundai Genesis

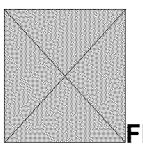
One interesting omission from the ’15 Genesis is an all-wheel-drive option for V-8 models. Stay tuned for a potential performance model with AWD in the next couple of years.

FULL ARTICLE

Video: '15 Hyundai Genesis Crash Test

Long list of advanced safety equipment helps '15 Hyundai Genesis gain designation as a “Top Safety Pick +” from Insurance Institute for Highway Safety.

No Worries, Europeans, EC’s Got Your Back – and Ears



FINAL INSPECTION BLOG

Once enacted, the region's new noise-reduction regulation states, “The reduction of the number of highly annoyed people will be 25%.” I’ve met more than a few highly annoyed people in Europe, many of them waiting tables in Paris, and traffic noise had nothing to do with it.

FULL ARTICLE

VW Leveraging MQB Architecture in U.S. Golf Lineup

VW quality chief says common architecture saves costs, but there is a risk if a bad part infects thousands of vehicles across multiple product ranges.

FULL ARTICLE

Video: WardsAuto Global Update – May 2014

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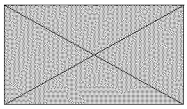
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WardsAuto Analyst Haig Stoddard's monthly brief on changes from the *WardsAuto* Forecasts global vehicle and powertrain insights related to

current and future plans of auto makers worldwide.

VideoWire

 Cadillac Updates XTS; Hyundai Tucson in Recall; Toyota, Tesla Split on Batteries

Supplier Roundup

Eaton enhances partnership with China's Great Wall; U.S. plastics maker's subsidiaries will coordinate with Swiss acquisition; Kiekert locks up Russian business.

FULL ARTICLE

Average Transaction Price a Stretch for Many Consumers

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Personal finance experts recommend following the 20-4-10 rule to maintain financial security and avoid high interest costs.

FULL ARTICLE

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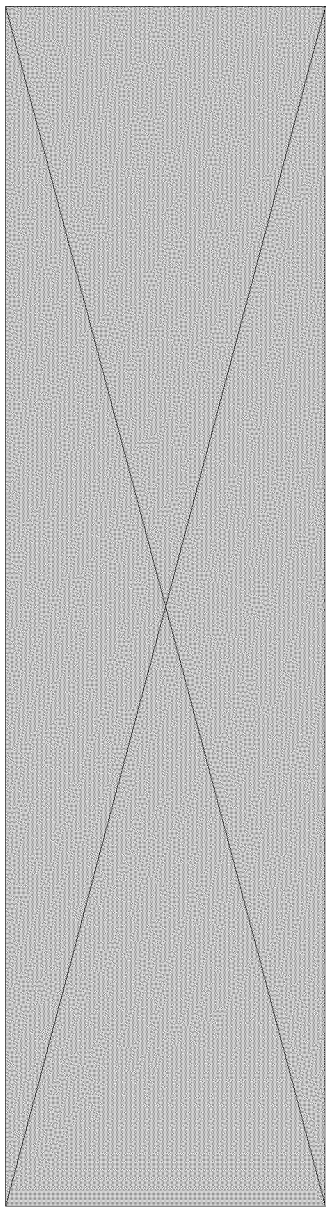
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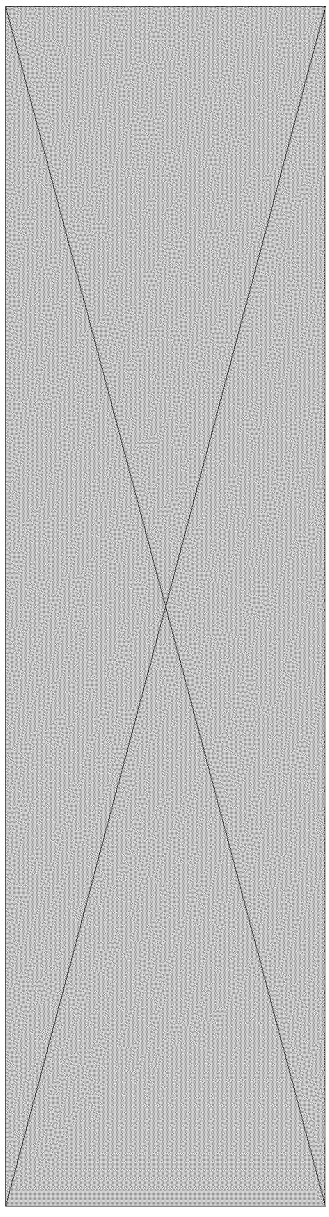
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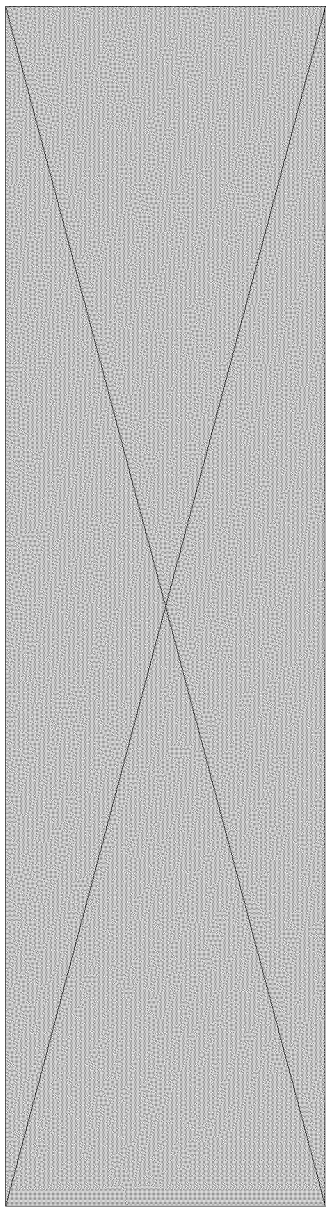
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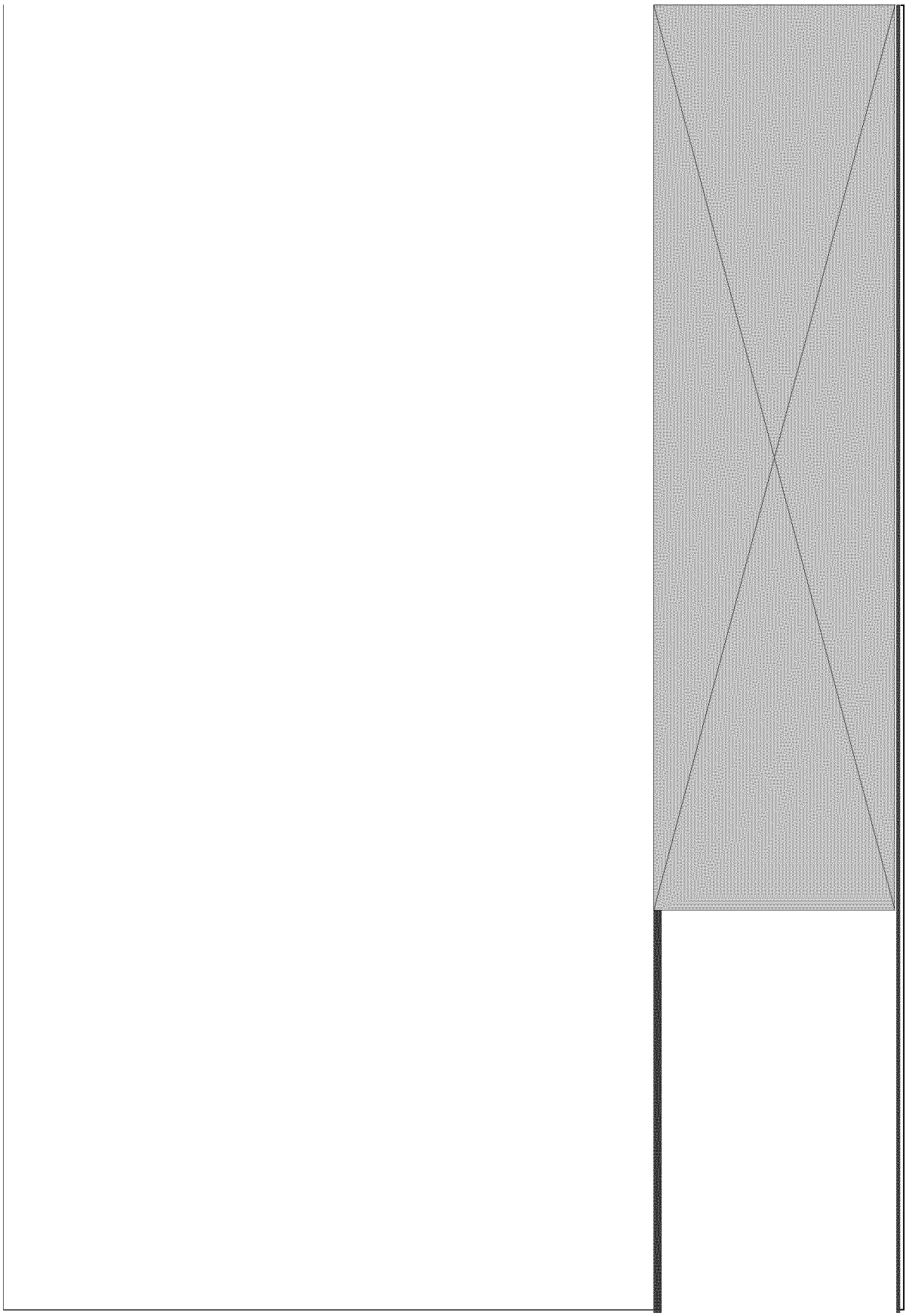
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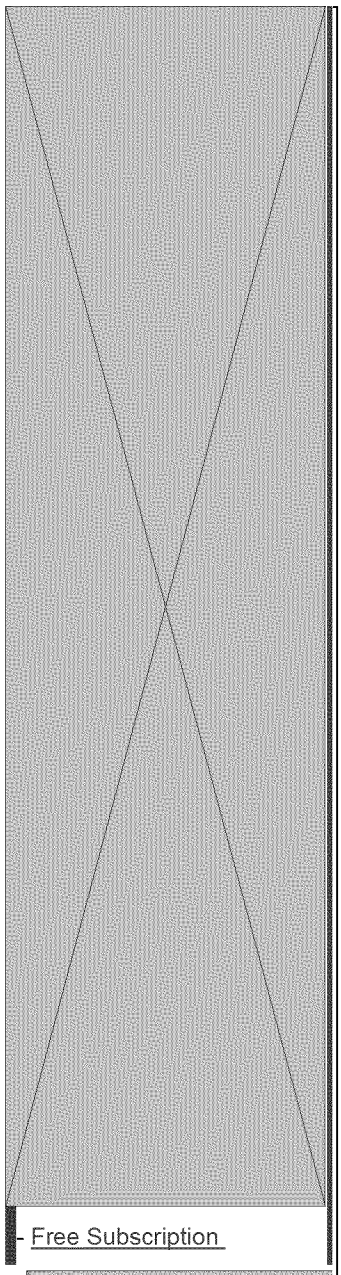
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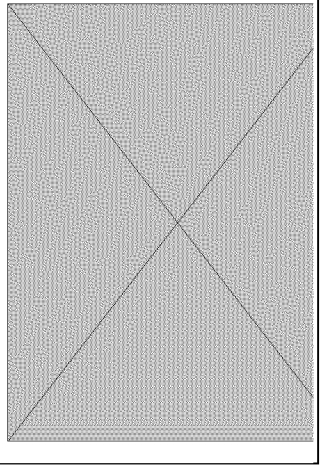
WHITEPAPER

This white paper details how to anticipate and mitigate





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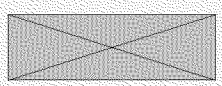
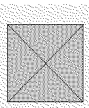
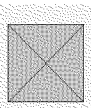
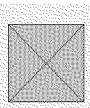
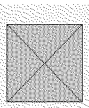
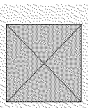


the risks of potential supply chain disruptions. Using five out-of-the-ordinary scenarios, it describes what can be done to prepare for disruptions and how to mitigate their effects after the event.

Download "Supply Chain Management: What You Don't See Can Hurt You" Whitepaper Now!

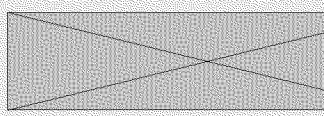
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper Now!

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To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 5/21/2014 11:04:15 AM
Subject: RE: VW361-0-0250 Confirmatory Test - Jetta 2.0MPI

Thanks David. We will prepare the vehicle for shipping.

Regards

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Tuesday, May 20, 2014 3:45 PM
To: Rodgers, William (EEO)
Cc: Allen, Gregory (EEO); Giles, Michael (EEO); Snyder, Jim
Subject: VW361-0-0250 Confirmatory Test

Bill,

The last confirmatory testing I find in the EPA data base for VW361-0-0250 took place in 2010 for the 2011 MY. The highway test results on that vehicle were a little over 41 MPG which were run at and confirmed at EPA. It appears the tires have significantly reduced the rolling resistance and based on the fairly significant increase in highway fuel economy observed on the new testing compared to the previous testing I located, EPA is interested in performing a confirmatory test on this FEDV.

Let me know if there are more recent data I have missed.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 @vw.com]; Ex. 7
Ex. 7
Ex. 7
From: Ex. 7
Sent: Wed 5/21/2014 5:41:25 PM
Subject: VW Group - e-Golf Test Schedule Request

Hello David,

As we discussed, Volkswagen is planning to complete our manufacturer testing of the new MY 2015 e-Golf in the next few weeks. This vehicle, which will be introduced later this year, is the first BEV for the US market, and therefore it is especially important for us to meet our tight timing and performance targets.

It is understood that this vehicle will be confirmatory tested at EPA.

We are hereby requesting that EPA make an early scheduling allowance for the testing of this vehicle, for the week of July 7th, or the next earliest available time.

Our goal is to insure that this window is available in the EPA schedule at the time we make the test data submission. AT the latest we expect our submissions to be completed by June 25, but plan on an earlier submission.

Thank you in advance for your consideration. Please let us know if you are able to assist us with this request.

Regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax:

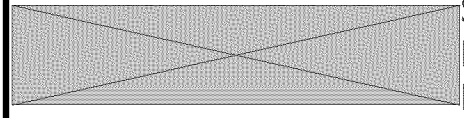
mailto:

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: IEN
Sent: Thur 5/22/2014 2:33:57 PM
Subject: IEN Connects: Spinal Tap Automatics; Workstation Cranes Solve Problems; Fire Shelters Enhance

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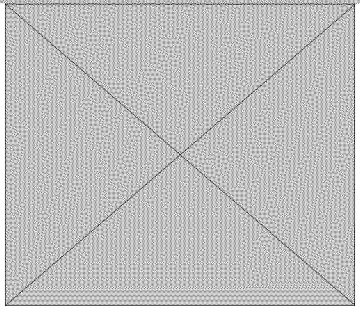
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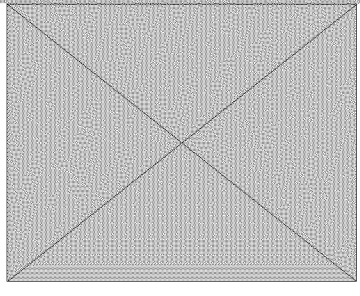
Spinal Tap Automatics, Widow Sues Porsche, and Autonomous Life-and-Death Decisions

WHEELS Operational efficiency drives VW up to ten speeds. In what could turn out to be the engineering/marketing equivalent of the O.J. trial, widow of driver in Paul Walker death sues Porsche. Plus, faced with an imminent crash, will an autonomous car make the right choice?
Read More

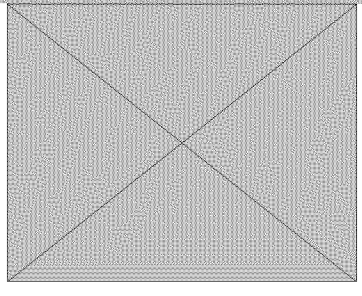
Hot New Products



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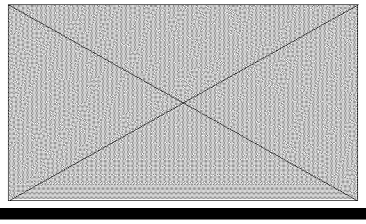


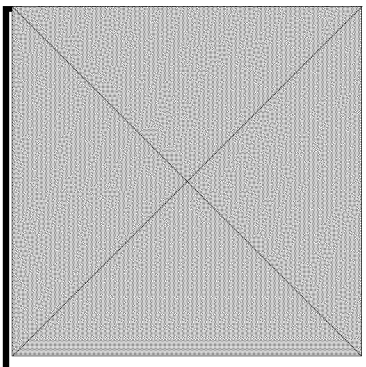
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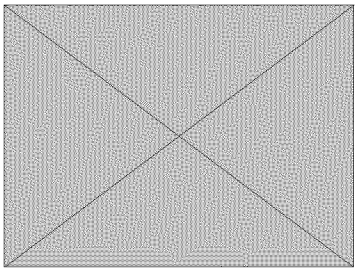




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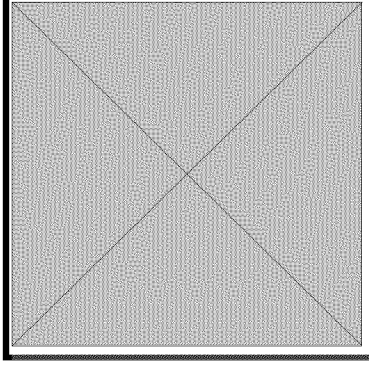
Problem Solvers:
Workstation Cranes Solve Problems for Automotive Manufacturer

A manufacturer of small stamped metal parts used in automobile manufacturing was looking to reorganize and expand its manufacturing work cell space. Previously, the company had metal and stamping machines placed in a line approximately 80 ft in length and 40 ft wide. The machines were under one overhead crane that had to service all loading/unloading of metal raw materials weighing up to 1,000 lb, as well as handle all material movements and assist with lifting the heavy progressive dies.

Read More.

Find more Problem Solvers here.

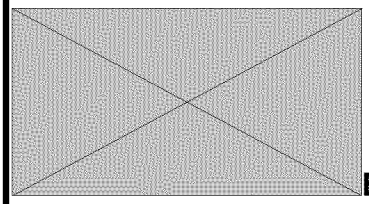
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Big Payload Material Lifts

PFlow has designed and built over 750 vertical material lifts with capacities of 20,000 lb or more for diverse applications. The Big lifts rely heavily on PFlow's superior engineering expertise. If you need to lift Big, you need to work with PFlow. See photos and summaries of eleven Big PFlow Lifts.

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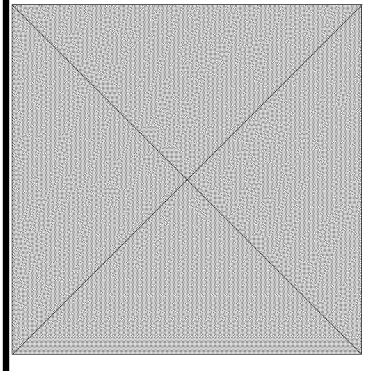


Eye on Safety:
Passive Fire Shelters Enhance Safety for Offshore Gas

Three passive fire shelters designed to protect the vital control electronics of automatic emergency shutdown and fire suppression systems on offshore gas production platforms in the Arabian Gulf are being supplied by the outdoor enclosure specialist Intertec. Fabricated using lightweight composite GRP (glass-reinforced polyester) materials, the shelters employ patented techniques to resist fire for two hours - allowing critical electronic safety equipment to remain operational. Although there are currently no standards covering containment temperatures for this application area, Intertec designs, manufactures, and tests its fire shelters to a rigorous proprietary specification, which demands that their internal temperature must remain below 60°C throughout the rated protection time. The novel shelters are also capable of withstanding both conventional and more severe hydrocarbon fires.

Read More.

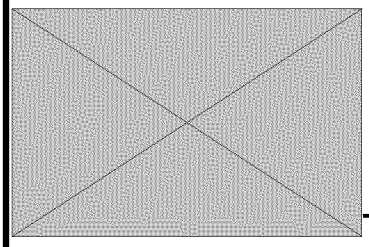
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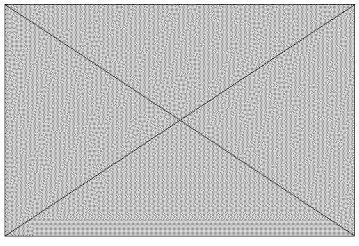


Think Lean:
AGV Streamlines Heavy Equipment Production Line

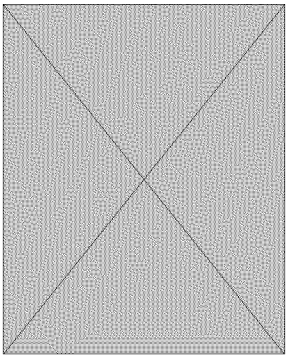
A southeastern U.S.-based heavy equipment manufacturer had been delivering engines to its assembly line using forklifts. The company identified a need to expand its manufacturing facilities and that determination included analyzing its material handling systems. In order to increase efficiencies and reduce the use of forklifts, it was considering using AGVs for moving the seven different engine models from a supermarket storage area to its assembly line. The company needed to have the engines sequenced to the line based on production forecasts and most importantly, be automated, safe, reliable, and operate with minimal personnel involvement.

Read More.

Conveyor System transports PV panels through assembly



High Performance Compounds are impact resistant



Slurry Blast System moves nozzles vertically and horizontally

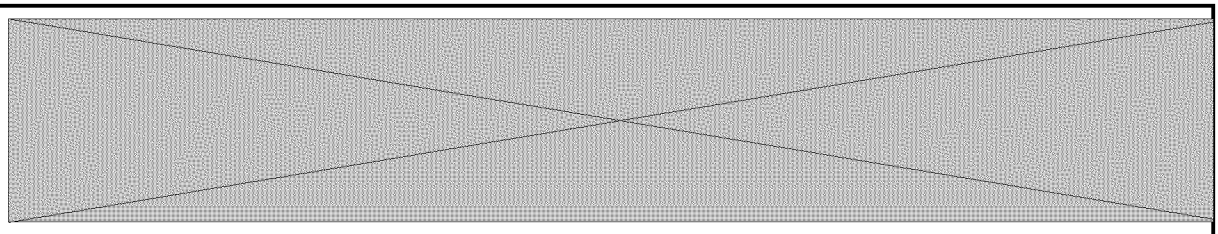
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Light Vehicle Engines - North American Availability and Specifications
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Presenting Ward's
10 Best Interiors of 2014
The Lines Are Blurred Between
Luxury and Mainstream Interiors.

Dear Reader,

Our 2014 Ward's 10 Best Interiors honorees, even those hailing from non-premium brands, are so lavishly appointed that a question springs to mind: Where exactly does one draw the line between mainstream vehicles and those considered "luxury?"

Check out a detailed photo gallery and in-depth summary of each of our ten winners.

Check out our cover story now, and be sure to read these articles:

- **GM Flexes Global Muscle for Ecotec Engine Program -** When the first batch of the new family of Ecotec small gasoline engines from General Motors arrives this summer, they will represent the broadest and most ambitious use of the automaker's global engineering might in its 106-year history. **READ MORE**

- **My Column: Love Affair with Cars Not Fading** I spent a day last month being crushed in the crowd at the Beijing Motor Show, where the world's largest vehicle market also appears to be the most car-crazy. **READ MORE**

- **John McElroy's Column: GM, NHTSA Should Dig Deeper -** By zeroing in on one case, we're missing the bigger picture. And that could lead to wrong-headed

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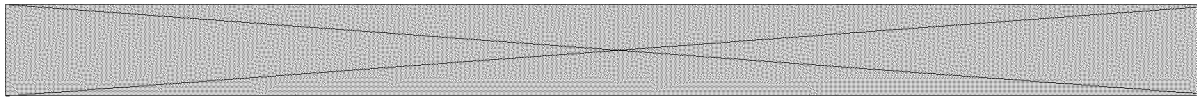
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Drew Winter
Editor-in-Chief
WardsAuto World



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To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 5/22/2014 6:29:35 PM
Subject: VW Group Decision information - 2.0l TDI

Hello David,

I have submitted four additionally fuel economy vehicle decision information files for consideration. These complete the test submissions for 2.0L TDI-SCR diesel models with automatic transmission. If you have any questions please let me know.

Regards,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7 @volkswagen.de]
From: Ex. 7
Sent: Fri 5/23/2014 11:51:43 AM
Subject: FW: EPA PHEV / BEV Questions
PHEV_BEV_Question_EPA.pdf

Hello Jim,

This might circle back to you. I did not get a response back from Linc and Dave, so we would still like to set up a meeting sometime soon to discuss our open questions. We did get some clarifying information from Rob French last week and my colleagues in Germany are revising the presentation accordingly. We will get back to you when you are back in the office next week. I will be traveling next week but I expect you may get contact from one of us.

Thank you and best regards,

Ex. 7

From: Ex. 7
Sent: Thursday, May 15, 2014 9:11 AM
To: wehrly.linc@epa.gov; 'wright.davida@epa.gov'
Subject: FW: EPA PHEV / BEV Questions

Hello Linc and David,

I just sent this email to Jim asking for a meeting and attaching some PHEV and BEV certification questions. Is it possible to discuss these points next week? Let me know if you have time available and I can set up a meeting.

Thank you and best regards,

Ex. 7

From: Ex. 7
Sent: Thursday, May 15, 2014 8:47 AM
To: Snyder, Jim (Snyder.Jim@epa.gov)
Subject: FW: EPA PHEV / BEV Questions

Hello Jim,

The VW Group would like to schedule a meeting (or conference call) with EPA staff and VW certification staff to discuss PHEV and BEV certification. There are still some questions we have regarding PHEV calculations and testing we would like to discuss with you. In advance of the meeting please see the

attached presentation with our open points or questions.

Is there a time that works best for you? My proposal is to have the meeting early next week if that is possible for EPA staff. I understand you may want to discuss our questions internally first.

Thank you and best regards,

Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7
From: Ex. 7
Sent: Tue 5/27/2014 12:23:20 PM
Subject: VW Group - Scheduling Requests

Hello Jim,

I would like to discuss our scheduling needs with you today when you have a minute. As reference I am sending in writing below, our timing needs for 4 upcoming vehicle tests:

1) Passat TDI currently scheduled for CW24: **We request to move this test to timeframe of CW 27/28 (weeks of June 30 or July 8) if possible, or CW26 otherwise.**

2) Jetta 2.0 TDI (selected) We will submit supplemental information (ready date CW 27 / June 30)

3) Jetta 2.0 MPI (selected) We will submit supplemental information (ready date CW 27 / June 30)

4) E-Golf (BEV): **We made a special request below for allowance of testing in CW28 (July 7).**

Please note for item 1 above, we are requesting a move to CW 27 or 28.

In addition, for item 4 we have requested a special scheduling allowance (if possible) for the e-Golf in CW28.

For the two Jetta vehicles listed in items 2 /3, we will submit the supplemental information today to initiate the scheduling date at EPA , which is requested for CW27.

I will try to call you later this morning to discuss.

Regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax: Ex. 7

mailto: Ex. 7

From: Ex. 7
Sent: Wednesday, May 21, 2014 1:41 PM
To: Wright, DavidA (Wright.DavidA@epa.gov)
Cc: Snyder, Jim; Rodgers, Ex. 7
Ex. 7 @vw.com)
Subject: VW Group - e-Golf Test Schedule Request

Hello David,

As we discussed, Volkswagen is planning to complete our manufacturer testing of the new MY 2015 e-Golf in the next few weeks. This vehicle, which will be introduced later this year, is the first BEV for the US market, and therefore it is especially important for us to meet our tight timing and performance targets.

It is understood that this vehicle will be confirmatory tested at EPA.

We are hereby requesting that EPA make an early scheduling allowance for the testing of this vehicle, for the week of July 7th, or the next earliest available time.

Our goal is to insure that this window is available in the EPA schedule at the time we make the test data submission. AT the latest we expect our submissions to be completed by June 25, but plan on an earlier submission.

Thank you in advance for your consideration. Please let us know if you are able to assist us with this request.

Regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

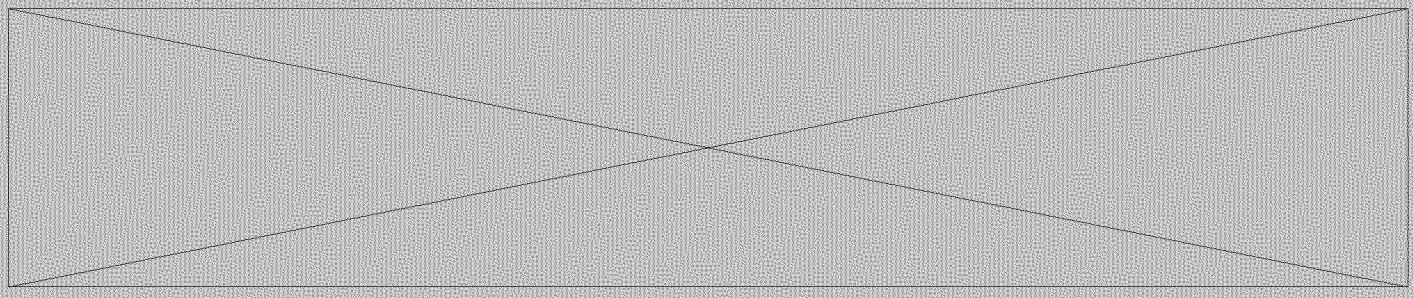
Fax: Ex. 7

mailto: Ex. 7

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: IEN
Sent: Tue 5/27/2014 4:47:23 PM
Subject: Industrial Equipment News: Monday Blog Alert

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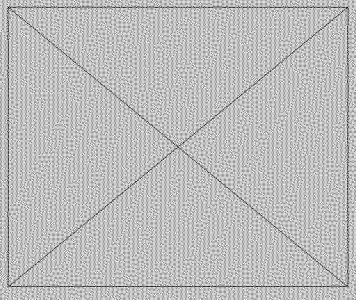
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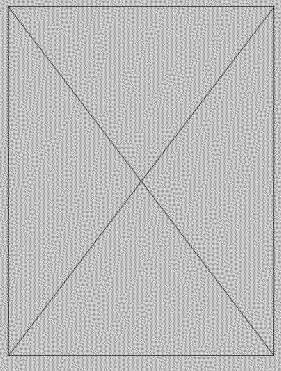
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Snowden, eBay, a Hack-Proof Drone, and Really Big Industrial Stuff

By Mark Devlin, IEN Staff

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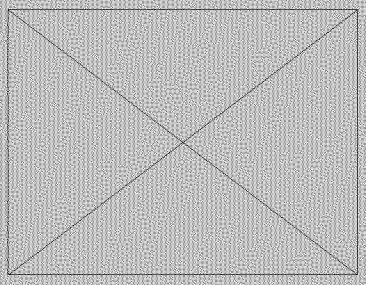
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Can technology prevent a growing danger on the nation's highways?

Spinal Tap Automatics, Widow Sues Porsche, and Autonomous Life- and-Death Decisions

By Mark Devlin, IEN Staff

WHEELS Operational efficiency drives VW up to ten speeds. In what could turn out to be the engineering/marketing equivalent of the O.J. trial, widow of driver in Paul Walker death sues Porsche. Plus, faced with an imminent crash, will an autonomous car make the right choice?



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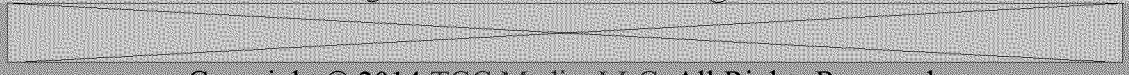
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To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Tue 5/27/2014 8:13:51 PM
Subject: RE: Cert Requests Rejected

Sorry, I started rejecting them and got pulled away right in the middle of it. Thanks for reminding me to finish the other two.

-Jim

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Tuesday, May 27, 2014 3:02 PM
To: Snyder, Jim
Subject: Cert Requests Rejected

Hello Jim,

We received the rejected cert requests for testgroup FVGAJ03.0AUD, but the three e-mails we received were all for Evap Family: FVGAR0140AAD. There should have been three conditional requests uploaded for the EVAP families below that need to be rejected so we can make the revisions and re-submit.

Testgroup: FVGAJ03.0AUD

Evap Families: FVGAR0140AAD

FVGAR0140AAC

FVGAR0140NAF

They came through on the verify reports with the correct Evap families, so I'm not sure why these e-mails are all duplicated.

Feel free to give me a call to discuss if you have any questions.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

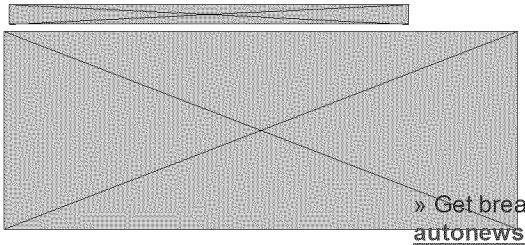
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From: Automotive News
Sent: Tue 5/27/2014 8:34:15 PM
Subject: DAILY: Hyundai dethrones Honda as greenest automaker | Ford's push upscale in Europe draws skeptics | Mini's radical facelift | A peek at Jaguar's BMW 3-series fighter | Inside Volvo's new XC90

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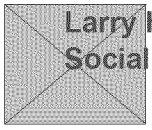
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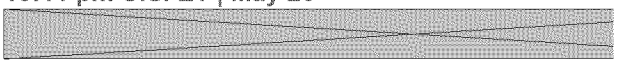
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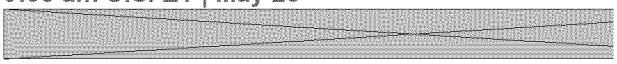
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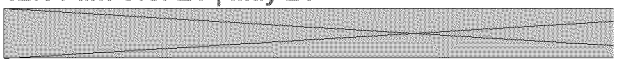
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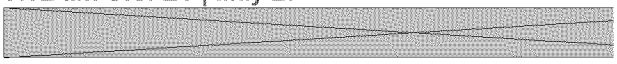
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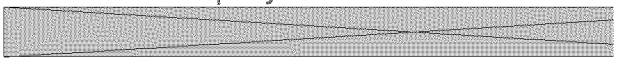
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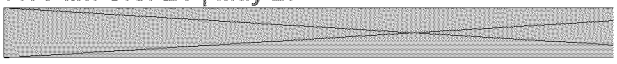
Linamar CEO delays goal of $9.2 billion sales by 2020

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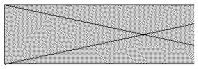


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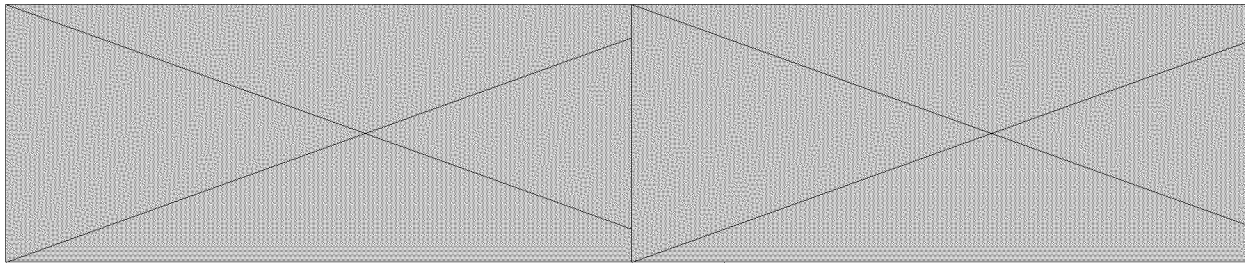


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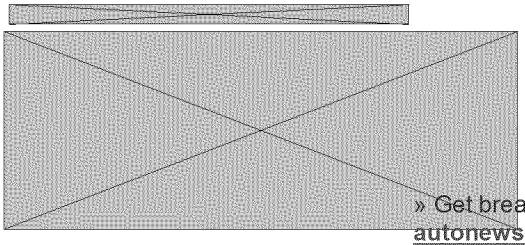
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From: Automotive News
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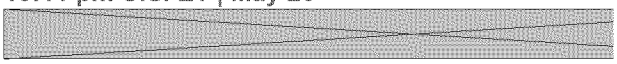
UPCOMING WEBINARS

» June 12 - Group Vehicle Redistribution by FirstLook

» June 24 - Automotive

switches

10:11 pm U.S. ET | May 26



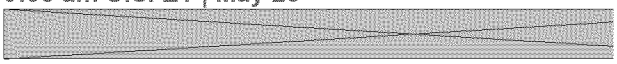
VW goes for value with Golf, GTI

12:01 am U.S. ET | May 25



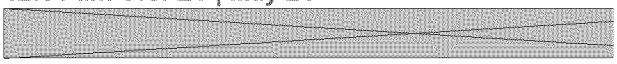
Kobe Steel, Toyota Tsusho explore joint aluminum output in U.S.

9:05 am U.S. ET | May 26



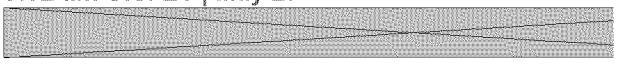
Marchionne urges U.S. customers not to buy the Fiat 500e EV

12:01 am U.S. ET | May 24



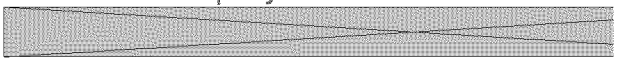
200,000 Nissan Sentras, Versas investigated for potential brake issue

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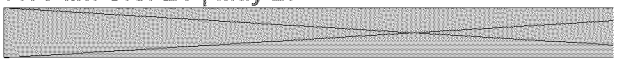
Linamar CEO delays goal of $9.2 billion sales by 2020

11:26 am U.S. ET | May 27

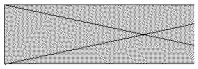


Toyota to raise directors' pay 19% after record profit

7:08 am U.S. ET | May 27

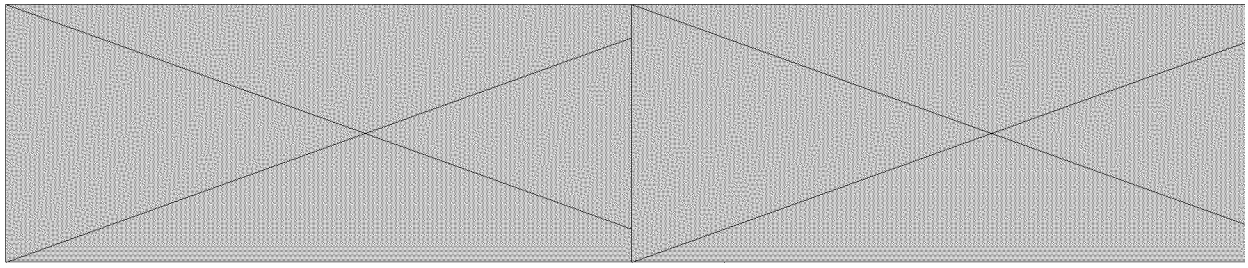


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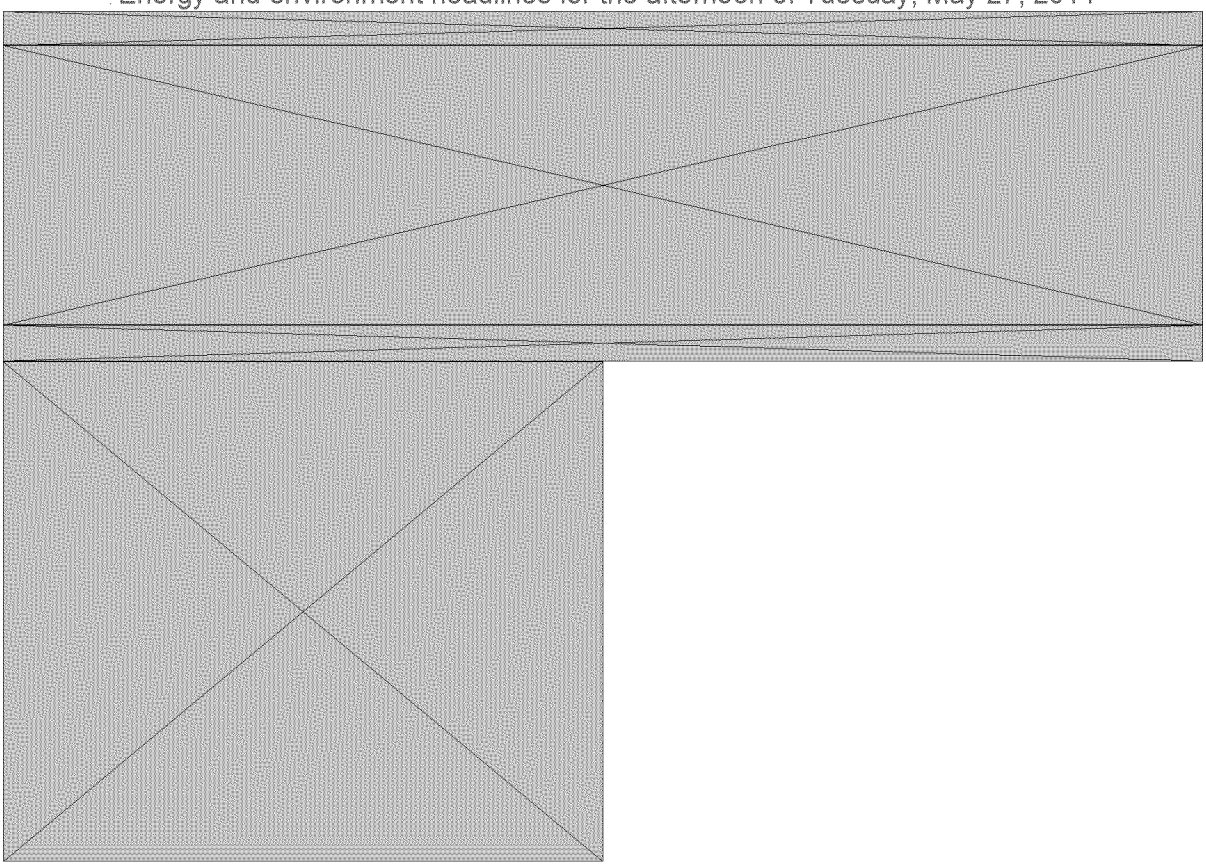
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To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Tue 5/27/2014 10:09:36 PM
Subject: API to Obama: Leave ozone limits unchanged

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Energy and environment headlines for the afternoon of Tuesday, May 27, 2014



API to Obama: Leave ozone limits unchanged

By Edward Felker

The American Petroleum Institute on Tuesday urged the Obama administration to resist calls to lower standards for smog-forming ozone pollution. An official with the group said tightening the standards would put most of the U.S. out of compliance and hit the economy with billions of dollars in annual new costs.

Howard Feldman, API's director of regulatory affairs, told reporters that the Environmental Protection Agency should include the current 2008 standard as an option for public comment under a court-ordered review this fall, despite calls from environmental groups for the

agency to lower allowable ozone levels.

EPA is still months away from the Dec. 1 deadline to propose an update to the 2008 standard of 75 parts per billion. That standard limits compliance problems largely to metropolitan areas.

Feldman said a new analysis for API found that lowering the standard to as few as 60 parts per billion would put 94 percent of the U.S. population in areas that violate the limit, including vast swaths of rural America.

"Further tightening the 2008 ozone standards, the most stringent ozone standards ever, is a major concern because of the potential cost and impact on the economy," he said.

Having so much of the country out of compliance would require expensive mitigation that would curtail development and job growth, Feldman said. He noted that EPA, in its 2010 proposal to set the standard at 60-70 parts per billion, estimated costs of $90 billion annually by 2020.

"Our ask is that the administrator consider and include in the proposal, keeping the current standard," Feldman said. "If she wants to solicit...comments on lowering the standard or raising the standard, those are also appropriate."

An EPA spokeswoman, Liz Purchia, did not comment on API's calls, but said EPA intends to meet the Dec. 1 deadline and is still working toward a proposal.

"EPA is obtaining advice from our science advisers during the ongoing review to ensure that the ozone standards protect public health and the environment as required by the law. The agency has not made decisions at this time on what to propose," she said.

The 2010 proposal had represented a move by EPA to reconsider the 2008 standard set under President George W. Bush.

The agency's administrator at the time, Lisa Jackson, found that the 2008 standard was not as protective of human health as the lower proposed standard, which was recommended by EPA's Clean Air Scientific Advisory Committee. EPA also said the rule would generate $100 billion annually in benefits to the economy from better health.

The proposal proved controversial, however, for the same reasons API brought up on Tuesday -- that it would require ozone reduction programs by states covering most of rural America and impose huge new costs on industry.

The earlier revision effort ended in 2011 when President Barack Obama ordered the proposal withdrawn in favor of EPA reviewing the rule in 2013, under a five-year timetable set in the law. He cited the goal of regulatory certainty and the weak economic recovery, along with other pollution rules by EPA, in ordering the withdrawal.

EPA's failure to undertake the review last year led to a lawsuit by environmental groups, and a ruling last month by a federal judge that Administrator Gina McCarthy must issue a proposal by December.

The agency's advisory committee is to make its own recommendations for the new review, and is to hold meetings on Wednesday and next week.

API and 11 other industrial and business groups, including the U.S. Chamber of Commerce and the American Chemistry Council, on May 19, wrote the committee to argue that there is no health evidence to support a lower standard and that it should consider the current standard in any range it considers.

Feldman said other interests beyond the committee -- industry included -- should have a chance to argue in favor of keeping the standard unchanged.

"Right now we think that's the step we're asking for, is, take input across the board," Feldman said. "The science advisers are just one of the stakeholders that provide input to the administrator -- they are not charged with setting the standard, that's not their role or responsibility."

Quick Links

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GE's Immelt tries to reassure French lawmakers

LNG from PNG: Exxon makes first shipment

Upcoming Events

NRC won't speed up move of spent fuel

By Dave Gram

MONTPELIER, Vt. (AP) — The U.S. Nuclear Regulatory Commission is rejecting calls from watchdog groups and some U.S. senators to speed up moving spent nuclear fuel from the pools where most of it is stored, weighing in on a debate over whether transfers should be made for safety concerns and not just logistics.

An NRC memo provided to The Associated Press on Tuesday shows the commission accepted its staff's recommendation to drop expedited transfer of the spent fuel from consideration.

The NRC's decision comes after years of increasing clamor to move spent fuel from thinly sheltered spent fuel pools into concrete and steel casks. Many plants have begun the transfers because they are running out of room in their spent fuel pools without the long-promised national waste dump.

The memo, issued Friday, says the NRC doesn't want to deal with the issue again.

"The Commission has approved the staff's recommendation that this ... activity be closed and that no further generic assessments be pursued related to possible regulatory actions to require the expedited transfer of spent fuel to dry cask storage," said the memo from Rochelle Bavol, acting secretary of the commission to Mark Satorius, the commission's

executive director for operations.

More

Millstone says faulty relay cause of power loss

By The Associated Press

WATERFORD, Conn. (AP) — A spokesman for the Millstone Power Station nuclear plant says a malfunctioning relay caused the loss of power over the weekend.

Ken Holt, spokesman for Connecticut's sole nuclear plant, on Tuesday blamed relay on a transmission line that carries power to and from the Waterford plant.

Power was restored Sunday, several hours after it failed. The plant, owned by Dominion Resources Inc., is still not operating and Holt said officials don't yet know when it will.

Millstone will have to go through many steps before operations resume.

Holt said the outage was the first to affect both units at the same time. He says Dominion, regional grid operator ISO-New England, and Connecticut Light & Power will look for long-term solutions.

Millstone supplies half of all power in Connecticut and 12 percent in New England.

Audit: Lack of cost control at SC nuke fuel plant

By Meg Kinnard

COLUMBIA, S.C. (AP) — Officials have been unable to control costs at a multibillion-dollar nuclear reactor fuel project at the Savannah River Site near Aiken, according to a new audit released this month.

The inspector general of the U.S. Energy Department says in the report that the National Nuclear Security Administration and a private contractor have been "largely unsuccessful" in keeping tabs on the facility that would turn weapons-grade plutonium into commercial reactor fuel.

The project, known as MOX, is part of a nonproliferation agreement between the United States and Russia, with each country agreeing to dispose of 34 tons of weapons-grade plutonium — an amount that officials have said is equal to 17,000 warheads. It would be the first of its kind in the United States.

Criticism has swirled around the project, which has been slow to attract customers for the

commercial reactor fuel it will produce. MOX Services has said negotiations are underway with several utility companies interested in buying the fuel, but none have officially signed on.

The project is more than three years behind its 2016 completion deadline and is also now expected to cost $3 billion more than planned, according to the General Accountability Office. The GAO has also said the project's price tag has ballooned to nearly $8 billion, citing design problems and issues with Energy Department oversight as reasons for the increase.

More

Oil stays above $104 on crises in Ukraine, Libya

By Pablo Gorondi, The Associated Press

The price of oil remained above $104 a barrel Tuesday as investors weighed how the conflicts in Ukraine and Libya were likely to affect crude supplies.

Benchmark crude for July delivery fell 24 cents to $104.11 a barrel on the New York Mercantile Exchange. Brent crude, a benchmark for international oils, dropped 30 cents to $110.02 on the ICE Futures exchange in London.

Ukraine is a key conduit for Russian gas deliveries to Europe. A proposed solution to a dispute over Ukrainian natural gas debts to Moscow raised hopes that a supply cutoff would be averted. Russia's acceptance of Petro Poroshenko's victory in Sunday's presidential elections was also regarded as a sign of easing tensions.

But the resurgence of fighting, as the government in Kiev responded with an airstrike to the pro-Russia separatists' occupation of the airport in Donetsk, a city of about 1 million in eastern Ukraine, underscored the uncertainties that remain.

Meanwhile, in Libya, which has been unable to stabilize since the ouster of Moammar Gadhafi in 2011, the National Oil Corporation said crude exports stood at 160,000 barrels a day, down from 1.4 million barrels a day a year ago. Several key export facilities are controlled by militias who do not recognize the central government.

More

Court sides with EPA on not setting new acid rain standard

By Pete Yost

WASHINGTON (AP) — A federal appeals court ruled Tuesday that the Environmental Protection Agency was justified in not establishing a new air quality standard for acid rain.

The EPA decided in 2012 after a lengthy rulemaking proceeding that it needed further scientific study before it could set a new air quality standard for oxides of nitrogen and oxides of sulfur.

Environmental groups claimed that EPA's failure to issue a new multi-pollutant rule violated the Clean Air Act.

In a 3-0 decision, the U.S. Court of Appeals for the District of Columbia Circuit said it was turning aside the environmental groups' petition for judicial review because the EPA could not form a reasoned judgment as the Clean Air Act requires.

"EPA did not simply leave in place the old standard," said appeals judge A. William Randolph. "Although it did not promulgate a new standard, it identified the data gaps that prevented it from doing so and initiated a data-collection program designed precisely to fill those gaps and facilitate future regulation."

Once EPA found that the two current standards were inadequate with respect to acid rain, the agency sought to determine what new multi-pollutant standard would be appropriate, the judges said. EPA recognized that a new national ambient air quality standard would necessarily be more complex than those set historically for just one pollutant, the court wrote.

More

A message from the American Petroleum Institute

America is now the world's #1 natural gas producer and is expected to become #1 in oil by 2015. Smart energy policies can create jobs, grow our economy and establish America as a global energy leader.

Learn more at ChooseEnergy.org

New Jersey tries again on pollution pact repeal

By The Associated Press

TRENTON, N.J. (AP) — Gov. Chris Christie's administration has told a court that it will take public comment and re-submit regulations to remove the state from a regional agreement to set limits on emissions by fossil fuel-burning power plants.

Christie withdrew the state from the Regional Greenhouse Gas Initiative in 2011, saying it was a failed public policy and a burden to taxpayers.

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Environmental groups sued

In March, an appeals panel ruled that the state did not follow all the provisions to repeal regulations tied to the agreement

According to a letter to the court last week, the Environmental Protection Department is planning to comply with the court ruling and will propose a new rule in July. The department will take public comment on the issue after that.

Energy-target proposal clears Ohio House committee

By Ann Sanner

COLUMBUS, Ohio (AP) — A contentious bill delaying the phase-in of Ohio's renewable energy and efficiency standards cleared a key legislative panel Tuesday, as state lawmakers seek to finish the measure before leaving for summer break.

The proposal addresses targets for how much energy Ohio utilities must generate from renewable sources, such as solar and wind, by 2025. The House Public Utilities Committee approved the bill 13-9, sending it to the full House.

Opponents of the legislation — including advanced-energy companies, faith and civil-rights leaders and environmentalists — have lobbied hard against the bill's two-year pause in the standards negotiated by Gov. John Kasich and senators. They say such targets promote environmentally friendly alternatives to fossil fuels and create high-tech jobs in the growing alternative-energy sector.

The bill's backers contend the targets drive up prices for average electric consumers who have been given little choice in the matter.

The measure cleared the Senate earlier this month after a committee backed off efforts to effectively repeal the mandates through a permanent moratorium.

More

After decades, dirty Pa. power plant to get clean

By Dina Cappiello and Kevin Begos

HOMER CITY, Pa. (AP) — Three years ago, the operators of one of the nation's dirtiest coal-fired power plants warned of "immediate and devastating" consequences from the Obama administration's push to clean up pollution from coal.

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Faced with cutting sulfur dioxide pollution blowing into downwind states by 80 percent in less than a year, lawyers for EME Homer City Generation L.P. sued the Environmental Protection Agency to block the rule, saying it would cause it grave harm and bring a painful spike in electricity bills.

None of those dire predictions came to pass.

Instead, the massive western Pennsylvania power plant is expected in a few years to turn from one of the worst polluters in the country to a model for how coal-fired power plants can slash pollution.

The story of the Homer City plant reflects the precarious position of older coal-fired plants these days, squeezed between cheap and plentiful natural gas and a string of environmental rules the Obama administration has targeted at coal, which supplies about half the nation's electricity. The latest regulation, the first proposal to curb earth-warming carbon dioxide from power plants, is due next week. It will pose yet another challenge to coal-fired power plants. Dozens of coal-fueled units have already announced they would close in the face of new rules.

But Homer City also shows how political and economic rhetoric sometimes doesn't match reality. Despite claims by Republicans and industry critics that the Obama administration's regulations will shut down coal-fired power plants, Homer City survived — partly because it bought itself time by tying up the regulation in courts. Even environmental groups that applaud each coal plant closing and protested Homer City's pollution, now say the facility is setting a benchmark for air pollution control that other coal plants should follow, even if it took decades.

More

New Mexico biofuel plant catches fire

By Juan Carlos LLorca

ANTHONY, N.M. (AP) — A New Mexico biofuel facility caught fire Tuesday, sending a giant column of black smoke into the air and prompting authorities to briefly evacuate an area that includes about 350 homes.

A series of small explosions was reported at the Rio Valley Biofuels plant near the town of Anthony, but there was no immediate word of any injuries, Dona Ana County spokesman Jess Williams said. Operations manager Jed Smith said he believed all five employees who work at the plant were OK.

County officials activated their emergency operations center and declared a hazardous materials emergency, Williams said. The immediate area was evacuated, but residents were

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allowed back in to their homes by early afternoon.

Anthony is on the New Mexico-Texas line between Las Cruces, New Mexico, and El Paso, Texas.

Witnesses described hearing loud explosions and seeing large flames as fire trucks and emergency responders rushed to the scene.

"We heard a few explosions, then a really loud one," witness Miguel Favela said. "You could hear the fire burning."

More

Hyundai-Kia tops Honda for green automaker crown

By The Associated Press

DETROIT (AP) — A scientists' group says Hyundai-Kia has unseated Honda as the greenest automaker in the U.S.

The Union of Concerned Scientists ranks the eight top-selling automakers based on carbon and smog-forming emissions of their fleets.

The group says all eight automakers reduced pollution for the first time.

Honda didn't win for the first time since the scientists began doing the rankings in 1998.

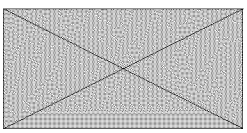
Hyundai-Kia beat Honda by equipping many models with smaller turbocharged engines. The scientists also say Hyundai-Kia introduced gas-electric hybrid versions of its two top-selling models, the Hyundai Sonata and Kia Optima.

Toyota, Nissan and Volkswagen tied for third place. Detroit automakers, which sell more trucks, finished at the bottom.

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Billionaire Tom Steyer makes midterm election plans, while Russia & China strike billion dollar gas deal



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Shale drillers' debt rising: Bloomberg

Revenue from shale drilling has increased just 5.6 percent over the past four years while operators' debt has nearly doubled, according to a Bloomberg analysis, and analysts warn some overextended companies may not be able to keep going.

More

GOP lawmakers to tilt at EPA over water in Phoenix hearing Monday

Republican congressmen, angry about the Environmental Protection Agency's intention to tinker with the Clean Water Act, have called a hearing Monday in Phoenix to discuss proposed new EPA rules, Roll Call reports.

More

Busy regulatory agenda planned for agencies: White House

The latest Unified Agenda of Federal and Regulatory and Deregulatory actions, released Friday, maps out extensive work for Obama administration agencies, touching on major issues including greenhouse gas emission standards, renewable fuel targets for 2015 and safety standards for oil trains as well as regulations covering methane and fracking, E&E reports.

More

SEC to tackle oil, mining foreign disclosure again

A court rejected the Security and Exchange Commission's first try at requiring oil and mining companies to disclose payments they make to foreign governments, but the SEC will make another attempt to craft a rule that will stand up to legal scrutiny, according to the Obama administration's latest report on upcoming regulations, The Hill reports.

More

Another EPA legal win: SCOTUS stays out of haze cases

Rejecting appeals from Oklahoma and North Dakota, the U.S. Supreme Court has declined to review lower court rulings backing the Environmental Protection Agency's decision to reject the states' plans for haze reduction, The Hill reports.

More

Industry mulling court demand response rejection

A ruling throwing out existing demand response incentives in the electricity industry – a

federal court having decided that the Federal Energy Regulatory Commission has no jurisdiction over the practice – is leaving grid operators like PJM Interconnection cautiously reviewing the situation, E&E reports.

More

States with big renewable generation may find carbon rule easier

States that get a sizeable chunk of their electricity from renewable energy sources, like Texas does from wind power, may not find it too difficult to comply with the Environmental Protection Agency's new rule on carbon emissions from existing power plants set to be unveiled Monday, FuelFix reports.

More

Pa. turnpike has 4 car charging stations but budget holding up additions

Budget issues are holding up plans to install electric car charging stations in 17 service plazas on the Pennsylvania Turnpike, although four are now operating, the Pittsburgh Tribune-Review reports.

More

GE's Immelt tries to reassure French lawmakers

General Electric CEO Jeff Immelt testified before the French Assembly's economics committee Tuesday, assuring lawmakers that his company, which is seeking to purchase Alstom's power business, would be willing to partner the government in France and also commit to boosting jobs there, The Wall Street Journal reports.

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LNG from PNG: Exxon makes first shipment

A $19 billion liquefied natural gas project in Papua, New Guinea that's been years in development has made its first shipment, according to Exxon Mobil, FuelFix reports.

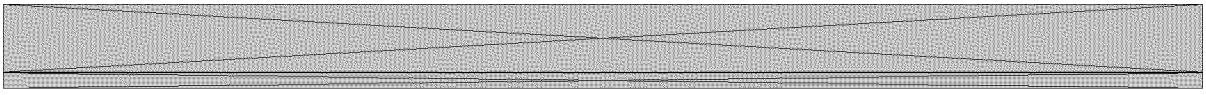
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Upcoming Events

- May. 27, Washington: American Petroleum Institute holds media teleconference on impacts of expected new EPA ozone standards. 1:30 pm , by teleconference.
- May. 27, New Orleans: Energy Department hosts its third Quadrennial Energy Review public meeting, "Petroleum Product Transmission and Distribution." 9:00 am , Louisiana State University.
- May. 28, Washington: House Energy and Commerce Energy and Power Subcommittee

holds opening statement session of business meeting on the Promoting New Manufacturing Act. Votes to be held Thursday. 4:30 pm , Rayburn 2123.

- May. 28, Washington: U.S. Chamber of Commerce Institute for 21st Century Energy releases study by IHS on impact of upcoming EPA power plant carbon regulations on the economy and power sector. 10:00 am , 1615 H St. N.W.
- May. 28, Washington: Energy Department, White House, GSA host 2014 Energy Datapalooza. Obama energy adviser John Podesta, Office of Science and Technology Policy Director John P. Holdren, Energy Secretary Ernest Moniz, GSA Administrator Dan Tangherlini to speak. 8:30 am , Reagan Building.



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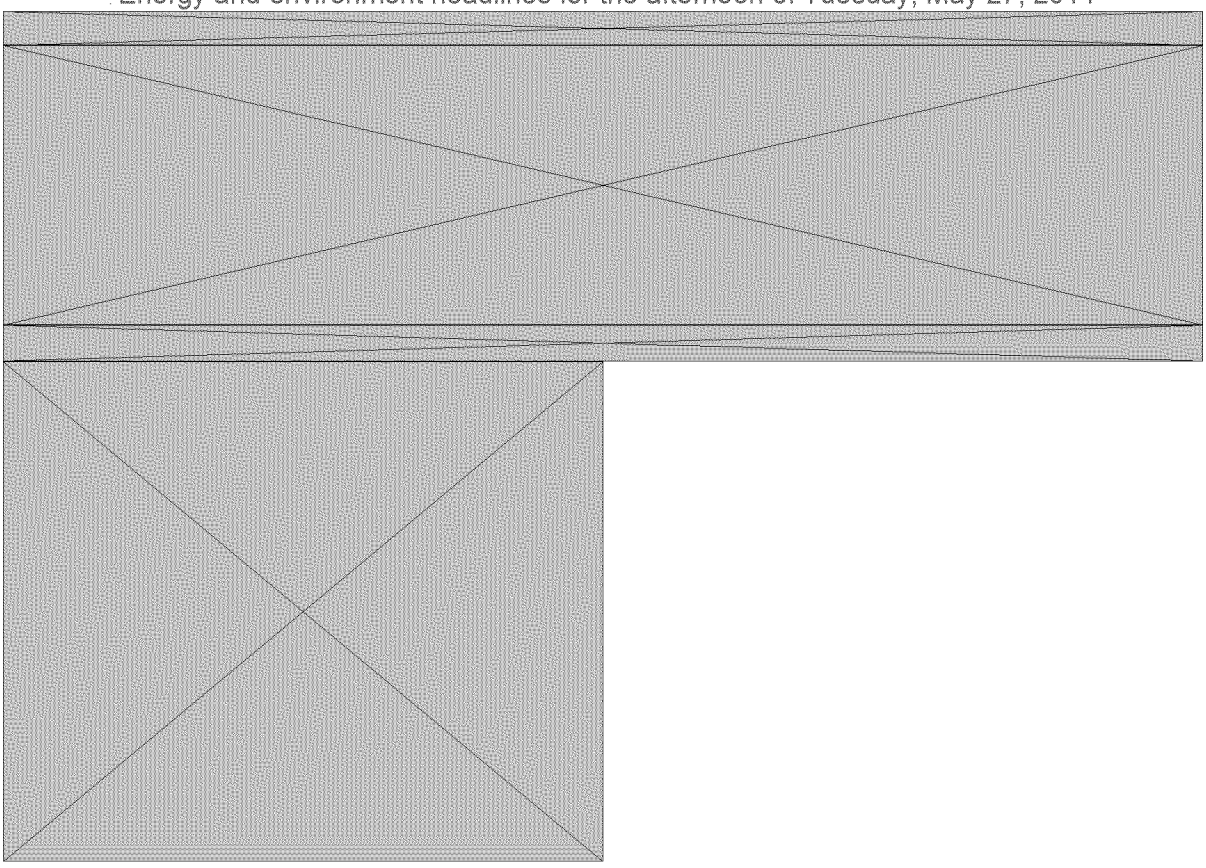
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From: EnergyGuardian
Sent: Tue 5/27/2014 10:09:37 PM
Subject: API to Obama: Leave ozone limits unchanged

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New Mexico biofuel plant catches fire

Hyundai-Kia tops Honda for green automaker crown

Shale drillers' debt rising: Bloomberg

GOP lawmakers to tilt at EPA over water in Phoenix hearing Monday

Busy regulatory agenda planned for agencies: White House

SEC to tackle oil, mining foreign disclosure again

Another EPA legal win: SCOTUS stays out of haze cases

Industry mulling court demand response rejection

States with big renewable generation may find carbon rule easier

Pa. turnpike has 4 car charging stations but budget holding up additions

GE's Immelt tries to reassure French lawmakers

LNG from PNG: Exxon makes first shipment

Upcoming Events

NRC won't speed up move of spent fuel

By Dave Gram

MONTPELIER, Vt. (AP) — The U.S. Nuclear Regulatory Commission is rejecting calls from watchdog groups and some U.S. senators to speed up moving spent nuclear fuel from the pools where most of it is stored, weighing in on a debate over whether transfers should be made for safety concerns and not just logistics.

An NRC memo provided to The Associated Press on Tuesday shows the commission accepted its staff's recommendation to drop expedited transfer of the spent fuel from consideration.

The NRC's decision comes after years of increasing clamor to move spent fuel from thinly sheltered spent fuel pools into concrete and steel casks. Many plants have begun the transfers because they are running out of room in their spent fuel pools without the long-promised national waste dump.

The memo, issued Friday, says the NRC doesn't want to deal with the issue again.

"The Commission has approved the staff's recommendation that this ... activity be closed and that no further generic assessments be pursued related to possible regulatory actions to require the expedited transfer of spent fuel to dry cask storage," said the memo from Rochelle Bavol, acting secretary of the commission to Mark Satorius, the commission's

executive director for operations.

More

Millstone says faulty relay cause of power loss

By The Associated Press

WATERFORD, Conn. (AP) — A spokesman for the Millstone Power Station nuclear plant says a malfunctioning relay caused the loss of power over the weekend.

Ken Holt, spokesman for Connecticut's sole nuclear plant, on Tuesday blamed relay on a transmission line that carries power to and from the Waterford plant.

Power was restored Sunday, several hours after it failed. The plant, owned by Dominion Resources Inc., is still not operating and Holt said officials don't yet know when it will.

Millstone will have to go through many steps before operations resume.

Holt said the outage was the first to affect both units at the same time. He says Dominion, regional grid operator ISO-New England, and Connecticut Light & Power will look for long-term solutions.

Millstone supplies half of all power in Connecticut and 12 percent in New England.

Audit: Lack of cost control at SC nuke fuel plant

By Meg Kinnard

COLUMBIA, S.C. (AP) — Officials have been unable to control costs at a multibillion-dollar nuclear reactor fuel project at the Savannah River Site near Aiken, according to a new audit released this month.

The inspector general of the U.S. Energy Department says in the report that the National Nuclear Security Administration and a private contractor have been "largely unsuccessful" in keeping tabs on the facility that would turn weapons-grade plutonium into commercial reactor fuel.

The project, known as MOX, is part of a nonproliferation agreement between the United States and Russia, with each country agreeing to dispose of 34 tons of weapons-grade plutonium — an amount that officials have said is equal to 17,000 warheads. It would be the first of its kind in the United States.

Criticism has swirled around the project, which has been slow to attract customers for the

commercial reactor fuel it will produce. MOX Services has said negotiations are underway with several utility companies interested in buying the fuel, but none have officially signed on.

The project is more than three years behind its 2016 completion deadline and is also now expected to cost $3 billion more than planned, according to the General Accountability Office. The GAO has also said the project's price tag has ballooned to nearly $8 billion, citing design problems and issues with Energy Department oversight as reasons for the increase.

More

Oil stays above $104 on crises in Ukraine, Libya

By Pablo Gorondi, The Associated Press

The price of oil remained above $104 a barrel Tuesday as investors weighed how the conflicts in Ukraine and Libya were likely to affect crude supplies.

Benchmark crude for July delivery fell 24 cents to $104.11 a barrel on the New York Mercantile Exchange. Brent crude, a benchmark for international oils, dropped 30 cents to $110.02 on the ICE Futures exchange in London.

Ukraine is a key conduit for Russian gas deliveries to Europe. A proposed solution to a dispute over Ukrainian natural gas debts to Moscow raised hopes that a supply cutoff would be averted. Russia's acceptance of Petro Poroshenko's victory in Sunday's presidential elections was also regarded as a sign of easing tensions.

But the resurgence of fighting, as the government in Kiev responded with an airstrike to the pro-Russia separatists' occupation of the airport in Donetsk, a city of about 1 million in eastern Ukraine, underscored the uncertainties that remain.

Meanwhile, in Libya, which has been unable to stabilize since the ouster of Moammar Gadhafi in 2011, the National Oil Corporation said crude exports stood at 160,000 barrels a day, down from 1.4 million barrels a day a year ago. Several key export facilities are controlled by militias who do not recognize the central government.

More

Court sides with EPA on not setting new acid rain standard

By Pete Yost

WASHINGTON (AP) — A federal appeals court ruled Tuesday that the Environmental Protection Agency was justified in not establishing a new air quality standard for acid rain.

The EPA decided in 2012 after a lengthy rulemaking proceeding that it needed further scientific study before it could set a new air quality standard for oxides of nitrogen and oxides of sulfur.

Environmental groups claimed that EPA's failure to issue a new multi-pollutant rule violated the Clean Air Act.

In a 3-0 decision, the U.S. Court of Appeals for the District of Columbia Circuit said it was turning aside the environmental groups' petition for judicial review because the EPA could not form a reasoned judgment as the Clean Air Act requires.

"EPA did not simply leave in place the old standard," said appeals judge A. William Randolph. "Although it did not promulgate a new standard, it identified the data gaps that prevented it from doing so and initiated a data-collection program designed precisely to fill those gaps and facilitate future regulation."

Once EPA found that the two current standards were inadequate with respect to acid rain, the agency sought to determine what new multi-pollutant standard would be appropriate, the judges said. EPA recognized that a new national ambient air quality standard would necessarily be more complex than those set historically for just one pollutant, the court wrote.

More

A message from the American Petroleum Institute

America is now the world's #1 natural gas producer and is expected to become #1 in oil by 2015. Smart energy policies can create jobs, grow our economy and establish America as a global energy leader.

Learn more at ChooseEnergy.org

New Jersey tries again on pollution pact repeal

By The Associated Press

TRENTON, N.J. (AP) — Gov. Chris Christie's administration has told a court that it will take public comment and re-submit regulations to remove the state from a regional agreement to set limits on emissions by fossil fuel-burning power plants.

Christie withdrew the state from the Regional Greenhouse Gas Initiative in 2011, saying it was a failed public policy and a burden to taxpayers.

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Environmental groups sued

In March, an appeals panel ruled that the state did not follow all the provisions to repeal regulations tied to the agreement

According to a letter to the court last week, the Environmental Protection Department is planning to comply with the court ruling and will propose a new rule in July. The department will take public comment on the issue after that.

Energy-target proposal clears Ohio House committee

By Ann Sanner

COLUMBUS, Ohio (AP) — A contentious bill delaying the phase-in of Ohio's renewable energy and efficiency standards cleared a key legislative panel Tuesday, as state lawmakers seek to finish the measure before leaving for summer break.

The proposal addresses targets for how much energy Ohio utilities must generate from renewable sources, such as solar and wind, by 2025. The House Public Utilities Committee approved the bill 13-9, sending it to the full House.

Opponents of the legislation — including advanced-energy companies, faith and civil-rights leaders and environmentalists — have lobbied hard against the bill's two-year pause in the standards negotiated by Gov. John Kasich and senators. They say such targets promote environmentally friendly alternatives to fossil fuels and create high-tech jobs in the growing alternative-energy sector.

The bill's backers contend the targets drive up prices for average electric consumers who have been given little choice in the matter.

The measure cleared the Senate earlier this month after a committee backed off efforts to effectively repeal the mandates through a permanent moratorium.

More

After decades, dirty Pa. power plant to get clean

By Dina Cappiello and Kevin Begos

HOMER CITY, Pa. (AP) — Three years ago, the operators of one of the nation's dirtiest coal-fired power plants warned of "immediate and devastating" consequences from the Obama administration's push to clean up pollution from coal.

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Faced with cutting sulfur dioxide pollution blowing into downwind states by 80 percent in less than a year, lawyers for EME Homer City Generation L.P. sued the Environmental Protection Agency to block the rule, saying it would cause it grave harm and bring a painful spike in electricity bills.

None of those dire predictions came to pass.

Instead, the massive western Pennsylvania power plant is expected in a few years to turn from one of the worst polluters in the country to a model for how coal-fired power plants can slash pollution.

The story of the Homer City plant reflects the precarious position of older coal-fired plants these days, squeezed between cheap and plentiful natural gas and a string of environmental rules the Obama administration has targeted at coal, which supplies about half the nation's electricity. The latest regulation, the first proposal to curb earth-warming carbon dioxide from power plants, is due next week. It will pose yet another challenge to coal-fired power plants. Dozens of coal-fueled units have already announced they would close in the face of new rules.

But Homer City also shows how political and economic rhetoric sometimes doesn't match reality. Despite claims by Republicans and industry critics that the Obama administration's regulations will shut down coal-fired power plants, Homer City survived — partly because it bought itself time by tying up the regulation in courts. Even environmental groups that applaud each coal plant closing and protested Homer City's pollution, now say the facility is setting a benchmark for air pollution control that other coal plants should follow, even if it took decades.

More

New Mexico biofuel plant catches fire

By Juan Carlos LLorca

ANTHONY, N.M. (AP) — A New Mexico biofuel facility caught fire Tuesday, sending a giant column of black smoke into the air and prompting authorities to briefly evacuate an area that includes about 350 homes.

A series of small explosions was reported at the Rio Valley Biofuels plant near the town of Anthony, but there was no immediate word of any injuries, Dona Ana County spokesman Jess Williams said. Operations manager Jed Smith said he believed all five employees who work at the plant were OK.

County officials activated their emergency operations center and declared a hazardous materials emergency, Williams said. The immediate area was evacuated, but residents were

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allowed back in to their homes by early afternoon.

Anthony is on the New Mexico-Texas line between Las Cruces, New Mexico, and El Paso, Texas.

Witnesses described hearing loud explosions and seeing large flames as fire trucks and emergency responders rushed to the scene.

"We heard a few explosions, then a really loud one," witness Miguel Favela said. "You could hear the fire burning."

More

Hyundai-Kia tops Honda for green automaker crown

By The Associated Press

DETROIT (AP) — A scientists' group says Hyundai-Kia has unseated Honda as the greenest automaker in the U.S.

The Union of Concerned Scientists ranks the eight top-selling automakers based on carbon and smog-forming emissions of their fleets.

The group says all eight automakers reduced pollution for the first time.

Honda didn't win for the first time since the scientists began doing the rankings in 1998.

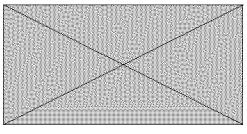
Hyundai-Kia beat Honda by equipping many models with smaller turbocharged engines. The scientists also say Hyundai-Kia introduced gas-electric hybrid versions of its two top-selling models, the Hyundai Sonata and Kia Optima.

Toyota, Nissan and Volkswagen tied for third place. Detroit automakers, which sell more trucks, finished at the bottom.

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Billionaire Tom Steyer makes midterm election plans, while Russia & China strike billion dollar gas deal



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Shale drillers' debt rising: Bloomberg

Revenue from shale drilling has increased just 5.6 percent over the past four years while operators' debt has nearly doubled, according to a Bloomberg analysis, and analysts warn some overextended companies may not be able to keep going.

More

GOP lawmakers to tilt at EPA over water in Phoenix hearing Monday

Republican congressmen, angry about the Environmental Protection Agency's intention to tinker with the Clean Water Act, have called a hearing Monday in Phoenix to discuss proposed new EPA rules, Roll Call reports.

More

Busy regulatory agenda planned for agencies: White House

The latest Unified Agenda of Federal and Regulatory and Deregulatory actions, released Friday, maps out extensive work for Obama administration agencies, touching on major issues including greenhouse gas emission standards, renewable fuel targets for 2015 and safety standards for oil trains as well as regulations covering methane and fracking, E&E reports.

More

SEC to tackle oil, mining foreign disclosure again

A court rejected the Security and Exchange Commission's first try at requiring oil and mining companies to disclose payments they make to foreign governments, but the SEC will make another attempt to craft a rule that will stand up to legal scrutiny, according to the Obama administration's latest report on upcoming regulations, The Hill reports.

More

Another EPA legal win: SCOTUS stays out of haze cases

Rejecting appeals from Oklahoma and North Dakota, the U.S. Supreme Court has declined to review lower court rulings backing the Environmental Protection Agency's decision to reject the states' plans for haze reduction, The Hill reports.

More

Industry mulling court demand response rejection

A ruling throwing out existing demand response incentives in the electricity industry – a

federal court having decided that the Federal Energy Regulatory Commission has no jurisdiction over the practice – is leaving grid operators like PJM Interconnection cautiously reviewing the situation, E&E reports.

More

States with big renewable generation may find carbon rule easier

States that get a sizeable chunk of their electricity from renewable energy sources, like Texas does from wind power, may not find it too difficult to comply with the Environmental Protection Agency's new rule on carbon emissions from existing power plants set to be unveiled Monday, FuelFix reports.

More

Pa. turnpike has 4 car charging stations but budget holding up additions

Budget issues are holding up plans to install electric car charging stations in 17 service plazas on the Pennsylvania Turnpike, although four are now operating, the Pittsburgh Tribune-Review reports.

More

GE's Immelt tries to reassure French lawmakers

General Electric CEO Jeff Immelt testified before the French Assembly's economics committee Tuesday, assuring lawmakers that his company, which is seeking to purchase Alstom's power business, would be willing to partner the government in France and also commit to boosting jobs there, The Wall Street Journal reports.

More

LNG from PNG: Exxon makes first shipment

A $19 billion liquefied natural gas project in Papua, New Guinea that's been years in development has made its first shipment, according to Exxon Mobil, FuelFix reports.

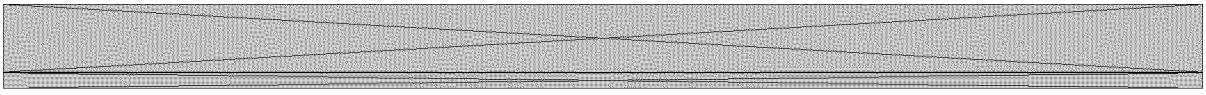
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Upcoming Events

- May. 27, Washington: American Petroleum Institute holds media teleconference on impacts of expected new EPA ozone standards. 1:30 pm , by teleconference.
- May. 27, New Orleans: Energy Department hosts its third Quadrennial Energy Review public meeting, "Petroleum Product Transmission and Distribution." 9:00 am , Louisiana State University.
- May. 28, Washington: House Energy and Commerce Energy and Power Subcommittee

holds opening statement session of business meeting on the Promoting New Manufacturing Act. Votes to be held Thursday. 4:30 pm , Rayburn 2123.

- May. 28, Washington: U.S. Chamber of Commerce Institute for 21st Century Energy releases study by IHS on impact of upcoming EPA power plant carbon regulations on the economy and power sector. 10:00 am , 1615 H St. N.W.
- May. 28, Washington: Energy Department, White House, GSA host 2014 Energy Datapalooza. Obama energy adviser John Podesta, Office of Science and Technology Policy Director John P. Holdren, Energy Secretary Ernest Moniz, GSA Administrator Dan Tangherlini to speak. 8:30 am , Reagan Building.



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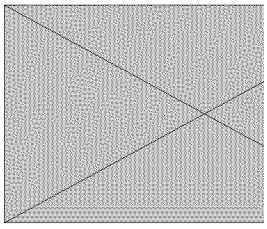
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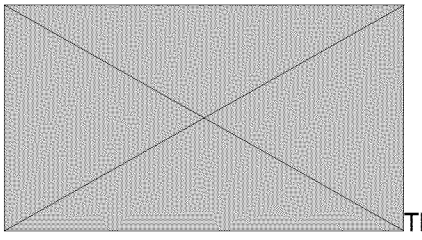
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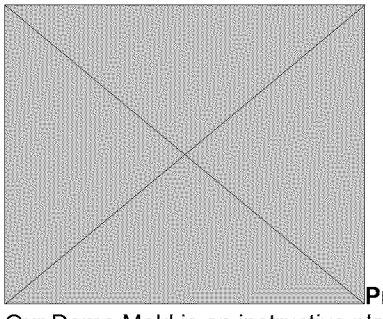
Expansive Mexican Site Signals Audi's North American Ambitions



The automaker's new San Jose Chiapa plant is about more than just building vehicles. For Audi, it is the first big stake in the ground for what is foreseen as a significant presence in the region.

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Protomold Demo Mold
Our Demo Mold is an instructive plastic model that shows the injection-molding mechanics behind the production of parts. See how the A and B sides of a mold interact with ejector pins, side-actions, gates, runners and other design features to create the prototypes that product designers and engineers see every day. Order a free Demo Mold now.

VW Counting on '15 Golf Lineup to Boost U.S. Presence

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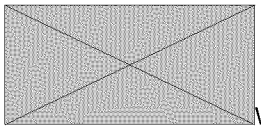
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

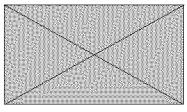
The Golf launch is expected to raise VW's profile in the U.S., but it's unlikely to usurp the top spot in the automaker's lineup, held by the Jetta.

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 Where else can you meet the minds that are moving manufacturing forward? Nowhere but IMTS 2014. With a focus on success through cooperation, the week will be filled with technology, education, and ideas that we can all benefit from. It's happening September 8–13 at McCormick Place Chicago. So come together and leave smarter. Register now or learn more at IMTS.com.

Autoline Daily

 Renault Delays Twingo EV; Nissan to Field LM P1 Car; Why Motor Racing is Losing Fans

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The race to 54.5 mpg by 2025 is on.

ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

GM Shelves Plan for Large Cadillac CUV

WardsAuto sources say the large Cadillac CUV was slated to arrive in 2017 as an '18 model. Persisting fears it might overlap with the popular Buick Enclave and GMC Acadia contributed to its cancellation.

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Supply Chain Management: What You Don't See Can Hurt You

The Japanese earthquake and subsequent tsunami of May 2011 underscored the fragility of the worldwide automotive supply chain. The disasters temporarily closed plants that produced 17 of the top 20 models of Japanese vehicles sold in the U.S. and prompted General Motors to close a plant in Louisiana and a Peugeot plant in Europe, according to a Congressional Research Service study. Learn More

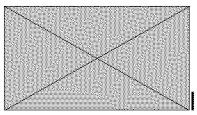
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Test Drive: Mercedes B-Class EV Gets an 'A'

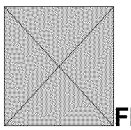
 If a graceful and nimble car like the new Mercedes-Benz EV springs from government rules, then regulators have gone above and beyond the call of duty.

FULL ARTICLE

Gallery: '14 Mercedes-Benz B-Class EV

Mercedes introduces its first electric vehicle in the U.S.

Love Affair With Cars Is Moving, Not Fading

 **FINAL INSPECTION BLOG**
Wherever else in the world enthusiasm for cars and trucks is waning, China will more than make up for it.

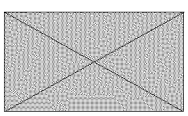
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Chrysler Looks to Hold Ground With New 200

The sell-down of the '14 model is proceeding in an orderly way. Production of the '15 200 started with only a 1-month's inventory of the previous-generation car on dealer lots.

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VideoWire

 Canada Probes GM Crashes; India's Oldest Plant Halted; Ford Upscale Push Has Skeptics

Williams Vows to Keep Focus on South as UAW Chief

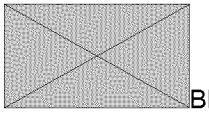
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As the UAW's regional director in Illinois Williams has dealt extensively with the Detroit Three automakers, Caterpillar, Case, Mitsubishi and Navistar, where he has been a board member for seven years.

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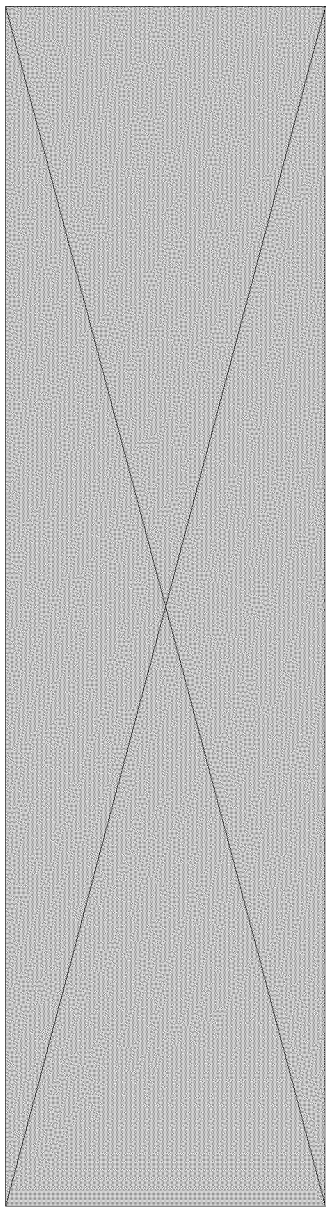
Test Drive: BMW i8 Not Quite Ready for Prime Time

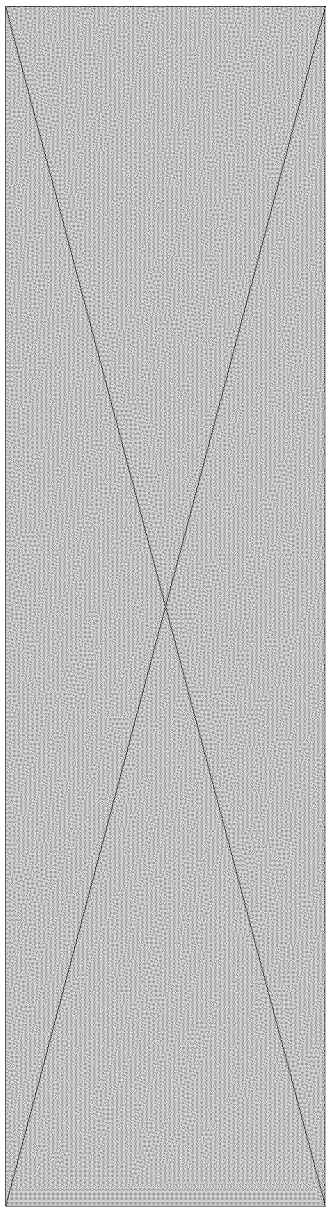
 BMW's beautiful and complex i8 is a design and engineering achievement but wants for electric range.

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Gallery: '15 BMW i8

BMW's new plug-in hybrid supercar is swell to look at, with sinuous swage lines, butterfly doors, laser-beam headlights and turquoise seatbelts among standout details.





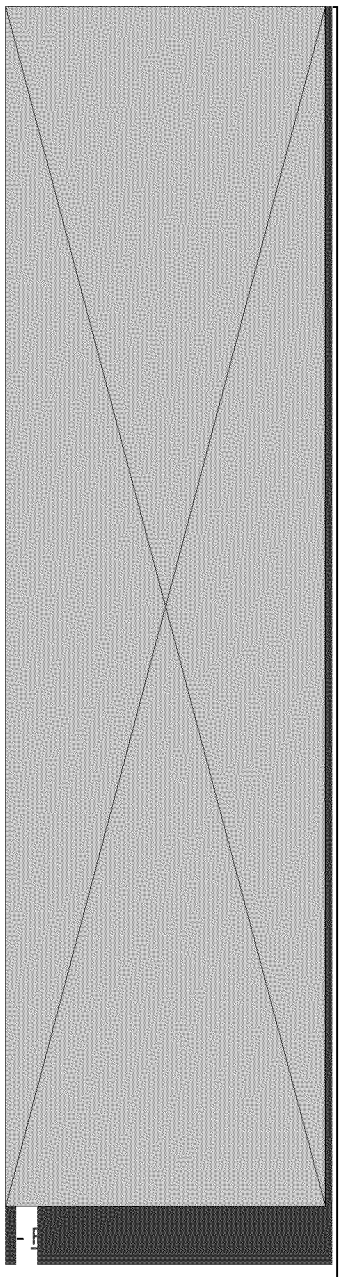
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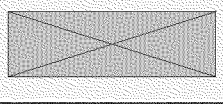
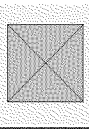
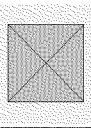
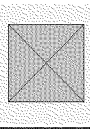
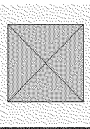
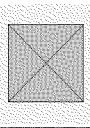
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more



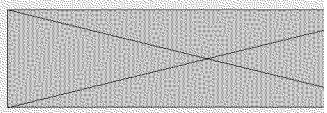
complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

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Cc: John German[john@theicct.org]; Wehrly, Linc[wehrly.linc@epa.gov]
To: Bunker, Byron[bunker.byron@epa.gov]
From: Drew Kodjak
Sent: Wed 5/28/2014 1:16:39 PM
Subject: Re: Quick Update - VW excess emissions

Byron / Linc,
Yes, we can share the report with VW.

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Byron - can you share your VW contact to make sure that we get the report to the right person (s)?

Drew

On May 28, 2014, at 8:29 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:

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Thanks,

Byron

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Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155

Mobile: (734) 353-9623
****

From: Drew Kodjak [mailto:drew@theicct.org]
Sent: Wednesday, May 28, 2014 6:37 AM
To: Bunker, Byron
Cc: John German
Subject: Quick Update - VW excess emissions

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Drew

To: Good, David[good.david@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov];
t.letkiewicz.ctr@dot.gov[t.letkiewicz.ctr@dot.gov]
From: Harry.Thompson@dot.gov
Sent: Wed 5/28/2014 2:10:42 PM
Subject: CAFE and Fuel Consumption

1. NHTSA has decided that VW and Porsche have combined fleets for MY 2012. Please generate IP and LT CAFÉ mpgs accordingly as soon as possible.

2. Following up on an email sent by Maurice Hicks: does EPA have any 2b&3 data since the last sharing in January 2014? Also, do summary charts exist, i.e., for MYs 2013 & 2014?

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To: Drew Kodjak[drew@theicct.org]
Cc: John German[john@theicct.org]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Bunker, Byron
Sent: Wed 5/28/2014 2:29:41 PM
Subject: RE: Quick Update - VW excess emissions

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Byron Bunker

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Mobile: (734) 353-9623

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From: Drew Kodjak [mailto:drew@theicct.org]
Sent: Wednesday, May 28, 2014 9:17 AM
To: Bunker, Byron
Cc: John German; Wehrly, Linc
Subject: Re: Quick Update - VW excess emissions

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To: Bunker, Byron[bunker.byron@epa.gov]
From: John German
Sent: Wed 5/28/2014 2:33:23 PM
Subject: Re: Quick Update - VW excess emissions

Yes, I know Ex. 7 well. I'll send him the WVU report.
John

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Drew

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Wed 5/28/2014 4:40:39 PM
Subject: RE: Test Reschedule

I heard back from the lab that it is now scheduled for 7/2/14.

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, May 28, 2014 11:15 AM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Allen, Gregory (EEO)
Subject: Test Reschedule

Hi Jim,

We have not heard back regarding the possibility to reschedule the Passat TDI - VID: 361 50070/15 from June 11th to week 26 or 27. We would prefer week 26 (June 25th.) Please let us know if this can be arranged.

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov]; t.letkiewicz.ctr@dot.gov[t.letkiewicz.ctr@dot.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; French, Roberts[french.roberts@epa.gov]; Zaremski, Sara[zaremski.sara@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
From: Good, David
Sent: Wed 5/28/2014 7:52:06 PM
Subject: RE: CAFE and Fuel Consumption; NHTSA decided to combine the 2012 VW/Porsche CAFE

Harry,

1. **Combining VW/Porsche 2012 CAFE calculations:** I'll call you about combining VW & Porsche CAFE fleets for MY 2012. I have a few questions, etc. As EPA staff indicated to NHTSA last year, it will take VW (and EPA) a couple months to combine the VW & Porsche 2012 fleets for CAFE calculations (and not combine them for GHG calculations); to recalculate their CAFE value and send EPA a revised CAFE model year report, etc.

2. **HD 2b/3 2015 PreMY Reports & Chrysler/Cummins final 2013 MY report:** See my previous email---I'll try to send you an update and all the HD 2b/3 CAFE/GHG reports in a day or so. [First, I need to see if Daimler, Chrysler & Cummins sent their 2015 pre-MY reports to EPA yet. If so, I need to double check the mfr values and update the EPA summary.]

3. **EPA Confirmatory Testing HD 2b/3 vehicles:** EPA will review the manufacturer's EPA test request for HD 2b/3 4WD vehicles and decide which vehicles to test here at our Ann Arbor MI lab. We can test HD vehicles up to and beyond 14,000 GVW (14,000 lb test weight) here at the EPA lab---so yes, we can test them. We don't test them on a 4WD dyno unless the mfr also tested the vehicle on a 4WD dyno. Normally, we disconnect the driveshaft and test them in the 2WD mode---on a 2WD dynamometer with the a, b, c dyno coefficients set to simulate the vehicle road load horsepower (RLHP) of a vehicle driven on the road (e.g. in the 2WD mode for selectable 2WD/4WD vehicles).

Dave

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Wednesday, May 28, 2014 10:11 AM

To: Good, David
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov
Subject: CAFE and Fuel Consumption

1. NHTSA has decided that VW and Porsche have combined fleets for MY 2012. Please generate IP and LT CAFÉ mpgs accordingly as soon as possible.

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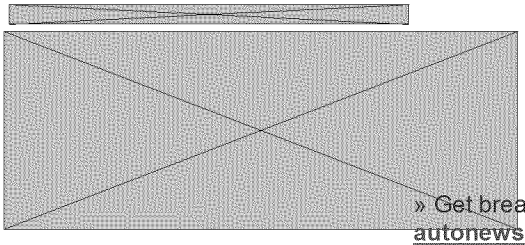
3. For 4WD 2b & 3 vehicles, will EPA do dyno testing on them? Is there a max GVWR or GAWR limit on the 4WD dyno?

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 5/28/2014 8:16:17 PM
Subject: DAILY: Akerson says Barra was unaware of GM's faulty ignition switches | Google preps own fleet of self-driving cars | Ford's new design chief in Europe | Why Mazda goes back to school

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May 28, 2014



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TOP NEWS

THE GM RECALL

'I bet my life' that Barra was unaware of safety defect, Akerson says

11:27 am U.S. ET | May 28

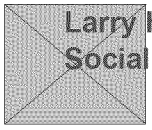
Former GM CEO Dan Akerson says in a new published report that his successor, Mary Barra, didn't know about a deadly safety defect in GM small cars when she took the job in January. ... » READ

Google plans own fleet of self-driving cars

4:08 am U.S. ET | May 28

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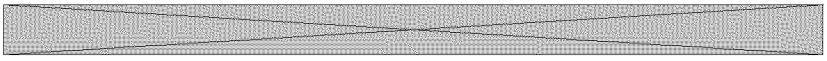
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http://www.tlsummits.com/2014socialmedia/index.html



Viper keeps SRT badge -- for now

12:01 am U.S. ET | May 24

The Viper sports coupe, Chrysler Group's exotic halo car, has an identity crisis. The automaker's most expensive vehicle will remain badged as an SRT, at least for now, even though Chrysler has folded the SRT brand into Dodge. ... » READ



U.S. seeks to fund Alcoa's bet on automotive aluminum

UPDATED: 5/28/14 9:49 am ET -- adds comment
9:00 pm U.S. ET | May 27

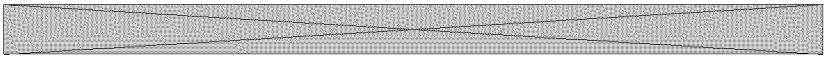
The United States Department of Energy has proposed lending money to Alcoa to expand aluminum production at a Tennessee factory, setting the stage for the first loan to a supplier under a dormant $25 billion fund. ... » READ



Tesla bonds assigned 'junk' status by S&P

UPDATED: 5/28/14 12:30 am ET - correction
5:06 pm U.S. ET | May 27

Tesla received a far less rousing recommendation from bond raters at Standard & Poor's Corp. -- which assigned the electric-vehicle maker a B- rating, or "junk" status. ... » READ

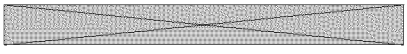


BEST PRACTICES

Sonic: E-sales offices speed replies to leads

12:01 am U.S. ET | May 26

In the past five years, Sonic Automotive dealerships have slashed average response times to electronic leads



to seven minutes. E-sales offices now operating in most of the chain's 105 stores have made the difference. ...
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Chevy, Honda

Ford names Mustang, F-150 team leader new Europe design chief

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Porsche inspecting 2,500 Macan crossovers for possible brake damage

1:15 pm U.S. ET | May 28

M-B drops subcompact

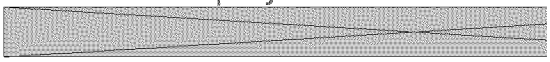
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» June 4 - ANE Congress
» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

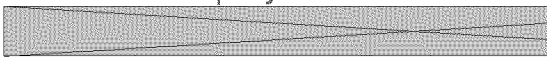
proposal; bigger Smart car may rival Audi A1

12:01 am U.S. ET | May 26



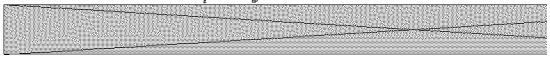
Top seller CarMax watches as rivals circle

12:01 am U.S. ET | May 26



BMW projects China will become No. 1 EV market by 2019

8:29 am U.S. ET | May 28



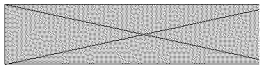
GM to start exporting cars from India in 2nd half of year

9:23 am U.S. ET | May 28



» June 12 - Group Vehicle Redistribution
by FirstLook

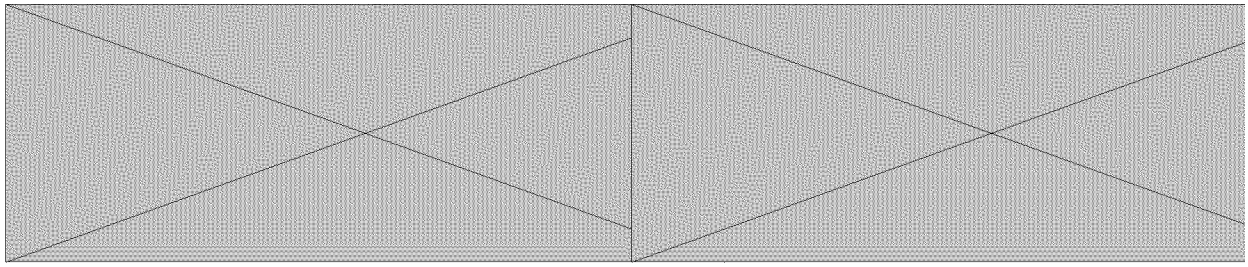
» June 24 - Automotive Innovation
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UPCOMING WEBINARS

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» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk

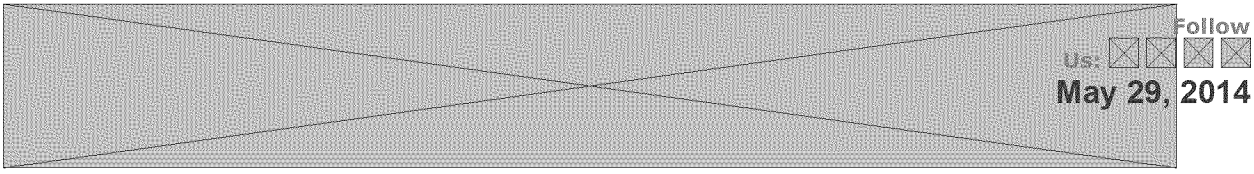


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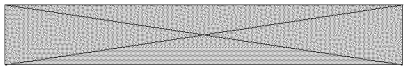
To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 5/29/2014 3:36:44 PM
Subject: VIDEO: VW's U.S. chief battles decline, awaits SUVs

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VW's U.S. chief battles decline, awaits SUVs

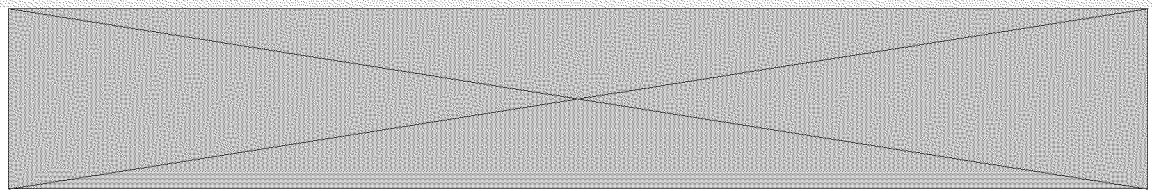
Michael Horn's new job has afforded little chance for honeymoon. An out-of-sync product lineup can't stem the VW brand's relentless U.S. sales slide. Meantime, he's trying to unite colleagues, push safety and placate dealers while speeding the arrival of SUVs that will help meet the parent company's ambitious sales goals.



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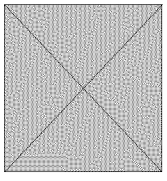
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Thur 5/29/2014 4:04:39 PM
Subject: Green Car Report Daily Headlines

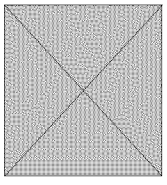
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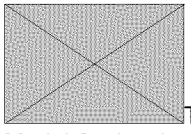
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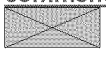


Tesla Model S Aerodynamics, 2014 Honda Accord Hybrid, Mercedes Plug-Ins: Today's Car News

May 29, 2014 02:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: The Tesla Model S wins the wind-tunnel war, Mercedes-Benz will introduce three plug-in hybrids by the end of 2015, and our video road test of the 2014 Honda Accord Hybrid. All this and more on Green Car Reports. BMW is the latest automaker to put its faith in the Chinese electric-car market, saying China will become the...

comments | read more





2015 Hyundai Sonata Prices Released, No Details On Hybrid Yet

May 29, 2014 01:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

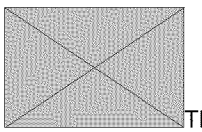
 Hyundai has announced pricing for the 2015 Sonata midsize sedan, but there's still no word on a new generation of the hybrid model found in the previous lineup. In response to a query, Hyundai representative Phil Floraday said, "The 2015 Sonata Hybrid details haven't

been announced yet--but there will be one." The 2015 Hyundai Sonata will...

comments | read more

Three Mercedes Plug-In Hybrids On Sale By End Of 2015: S-Class, C-Class, ML-Class

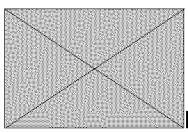
May 29, 2014 01:00 pm | feedback@highgearmedia.com (John Voelcker)

 The first wave of electric cars and plug-in hybrids has been largely centered on smaller vehicles, mostly from mass-market brands (Tesla excepted). Four years later, German luxury makers are entering the fray--and the plug-in cars and utility vehicles they sell will markedly expand the offerings on the market. DON'T MISS: Mercedes-Benz S-Class...

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2014 Honda Accord Hybrid: Video Road Test

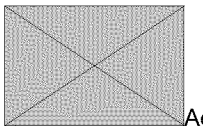
May 29, 2014 12:30 pm | feedback@highgearmedia.com (Joel Feder)

 Honda was the first car company to sell a hybrid in the U.S. by a few months, but it hasn't done nearly as well with its hybrids as Toyota has done with its Prius. Its first two-seat Insight wasn't close enough to the mainstream--and the first Honda Accord Hybrid in 2004 didn't post gas-mileage numbers that were all that great. That's changed with...

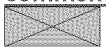
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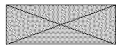
Aerodynamic Tesla Model S Electric Car Wins The Wind-Tunnel Wars

May 29, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Aerodynamics are a vital component of automotive efficiency. The more air you have to push out of the way to reach or maintain a certain speed, the more energy you're using. And the more energy you use, the less efficient your journey will be. Tesla Model S owners don't need aero numbers to confirm their car's efficiency, but it doesn't hurt--and...

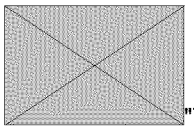
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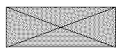
Efficiency, Performance From Audi's Electric Turbo Prototype

May 29, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 "Turbo" was the word to have on your car in the 1980s. Preferably in huge, bright script, completely out of correlation with the car's actual performance. Now, it's more often used as an indication of efficiency--take Ford's Ecoboost brand, for example. Audi has used them for many years on its gasoline and diesel models, and has now put its latest...

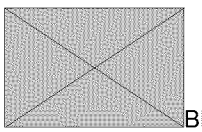
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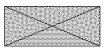
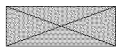


BMW: China Biggest Electric Car Market By 2019, i3 On Sale Soon

May 29, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 BMW has become the latest in a growing list of automakers to put its faith in the Chinese electric car market. The Chinese automobile market is huge: 18 million passenger cars alone were sold in 2013. That's ten times that of similarly-populated India, and around 2.4 million more than were sold in the U.S. But so far, electric vehicle sales have...

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To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Thur 5/29/2014 9:41:35 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-5-28-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

Attached are the data in Verify as of May 28, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on June 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen	Audi Group of	A3	VGA 7	2.0	4
		2015 Volkswagen	Audi Group of	A3 Cabriolet	VGA 6	2.0	4
		2015 Volkswagen	Audi Group of	A3 Cabriolet quattro	VGA 5	1.8	4
		2015 Volkswagen	Audi Group of	A3 quattro	VGA 4	1.8	4
		2015 Volkswagen	Audi Group of	A4	VGA 46	2.0	4
		2015 Volkswagen	Audi Group of	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen	Audi Group of	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen	Audi Group of	A6	VGA 47	2.0	4
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 48	2.0	4
Diesel;		2015 Volkswagen	Audi Group of	A6 quattro	VGA 17	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen	Audi Group of	A8	VGA 40	3.0	6
		2015 Volkswagen	Audi Group of	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen	Audi Group of	A8L	VGA 15	3.0	6
		2015 Volkswagen	Audi Group of	A8L	VGA 41	3.0	6
		2015 Volkswagen	Audi Group of	A8L	VGA 10	4.0	8
		2015 Volkswagen	Audi Group of	A8L	VGA 14	6.3	12
Error-- conY		2015 Volkswage	Audi	Q3	VGA 62	2.0	4
		2015 Volkswagen	Audi Group of	Q3 quattro	VGA 37	2.0	4
Diesel;		2015 Volkswagen	Audi Group of	Q5	VGA 16	3.0	6
Hybrid; ErrY		2015 Volkswage	Audi	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen	Audi Group of	Q7	VGA 12	3.0	6
		2015 Volkswagen	Audi Group of	Q7	VGA 51	3.0	6
		2015 Volkswagen	Audi Group of	R8	VGA 27	4.2	8
		2015 Volkswagen	Audi Group of	R8	VGA 29	4.2	8
		2015 Volkswagen	Audi Group of	R8	VGA 35	5.2	10
		2015 Volkswagen	Audi Group of	R8	VGA 33	5.2	10
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen	Audi Group of	RS5	VGA 30	4.2	8
		2015 Volkswagen	Audi Group of	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen	Audi Group of	RS7	VGA 21	4.0	8
		2015 Volkswagen	Audi Group of	S3	VGA 42	2.0	4
		2015 Volkswagen	Audi Group of	S6	VGA 20	4.0	8
		2015 Volkswagen	Audi Group of	S7	VGA 19	4.0	8
		2015 Volkswagen	Audi Group of	S8	VGA 9	4.0	8
		2015 Volkswagen	Audi Group of	TT Coupe quattro	VGA 2	2.0	4
		2015 Volkswagen	Audi Group of	TT Roadster quattro	VGA 3	2.0	4
		2015 Volkswagen	Bentley	Continental GT	VGA 24	4.0	8
		2015 Volkswagen	Bentley	Continental GT	VGA 43	6.0	12
		2015 Volkswagen	Bentley	Continental GT Convertible	VGA 22	4.0	8
		2015 Volkswagen	Bentley	Continental GT Convertible	VGA 45	6.0	12
		2015 Volkswagen	Bentley	Flying Spur	VGA 23	4.0	8
		2015 Volkswagen	Bentley	Flying Spur	VGA 44	6.0	12
		2015 Volkswagen	Bentley	Mulsanne	VGA 61	6.8	8
		2015 Volkswagen	Bugatti	Veyron	VGA 60	8.0	16
		2015 Volkswage	Lamborghi	Aventador	VGA 52	6.5	12
		2015 Volkswagen	Lamborghini	Aventador Roadster	VGA 53	6.5	12
		2015 Volkswage	Lamborghi	Aventador	VGA 54	6.5	12
		2015 Volkswagen	Lamborghini	Huracan	VGA 25	5.2	10

	2015	Volkswagen	Volkswagen	CC	VGA	58	2.0	4
	2015	Volkswagen	Volkswagen	CC	VGA	59	2.0	4
	2015	Volkswagen	Volkswagen	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen	Volkswagen	Jetta	VGA	36	2.0	4
	2015	Volkswagen	Volkswagen	Golf GTI	VGA	1	2.0	4
	2015	Volkswagen	Volkswagen	Golf GTI	VGA	8	2.0	4
	2015	Volkswagen	Volkswagen	Passat	VGA	55	3.6	6
	2015	Volkswagen	Volkswagen	Tiguan	VGA	39	2.0	4
	2015	Volkswagen	Volkswagen	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Touareg	VGA	13	3.0	6
	2015	Volkswagen	Volkswagen	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S6)	20	29	23				24.8499	40.0002	29.9663
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995
Auto(AM-S6)	22	31	26				28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26				28.3669	42.1911	33.2728
Auto(S8)	15	25	19				19.1000	33.5000	23.6806
Auto(S8)	12	21	15				15.4000	28.3000	19.3741
Auto(S8)	14	24	17				17.3000	31.8000	21.7662
Auto(S8)	12	20	15				14.4000	26.7000	18.1658
Auto(S8)	14	24	17				17.3000	31.8000	21.7662
Auto(S8)	12	20	15				14.4000	26.7000	18.1658
Auto(S8)	11	18	13				12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10				10.0000	17.9000	12.4782
Auto(AM-S	11	18	13				12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12				11.5000	21.2000	14.4817
Auto(AM-S	11	17	13				12.5000	22.7000	15.6681
Auto(AM-S7)	14	20	16				16.8000	25.5000	19.8471

Error in Rounded Adjusted Highway CO2, we calculate 326; Error in Rounded Adjusted combined CO2, we calculate 395

Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable		8	(e.g. C
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual		6	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual		6	
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable		8	(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic		8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic		8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic		8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic		8	
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic		8	
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic		8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic		8	
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic		8	
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic		8	
18.6019	28.9389	22.0647		TC	Turbocharged	SA	Semi-Auto		6	
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic		6	
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic		8	
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Auto		8	
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic		8	
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic		8	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual		6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual		6	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual		6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual		6	
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic		8	
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable		7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable		7	(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic		8	
22.3665	31.1759	25.6242		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
22.3665	31.1759	25.6242		TC	Turbocharged	AMS	Automated Manual- Selectable		6	(e.g. Au
15.2087	25.3816	18.5553		TC	Turbocharged	SA	Semi-Automatic		8	
12.4737	21.0866	15.2827	G	TC	Turbocharged	SA	Semi-Automatic		8	
13.8190	23.8488	17.0447	G	TC	Turbocharged	SA	Semi-Automatic		8	
12.0228	20.0478	14.6643	G	TC	Turbocharged	SA	Semi-Automatic		8	
13.8190	23.8488	17.0447	G	TC	Turbocharged	SA	Semi-Automatic		8	
12.0228	20.0478	14.6643	G	TC	Turbocharged	SA	Semi-Automatic		8	
10.5402	17.7129	12.8889	G	TC	Turbocharged	SA	Semi-Automatic		8	
8.4232	14.7698	10.4424	G	TC	Turbocharged	AMS	Automated Manual- Selectable		7	(e.g. Au
10.6055	18.4729	13.1199	G	NA	Naturally A	AMS	Automated		7	
9.7957	16.2453	11.9264	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au
10.6353	16.9743	12.7836	G	NA	Naturally A	AMS	Automated		7	
14.0224	20.0427	16.2140	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable		7	(e.g. Au

; Please revise/clarify as needed.

21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable (e.g. Au	6
20.6665	31.8238	24.5378	TC	Turbocharged	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	SA	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable (e.g. Au	6
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable (e.g. Au	6
24.9095	34.2917	28.4070	TC	Turbocharged	M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AMS	Automated Manual- Selectable (e.g. Au	6
20.5496	25.7855	22.6161	TC	Turbocharged	SA	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SA	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SA	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	SA	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Dri	VGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Dri	VGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV02.	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV02.	0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Dri	VGAV02t	0AUB	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	VGAV02.	0AUB	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	VGAV02.	0AUB	15		GP	Gasoline (Premium
N	N	F	2-Wheel Dri	VGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	VGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	VGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	VGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV06.	3VUM	15		GP	Gasoline (Premium
Y	N	F	2-Wheel D	FVGAV02.		15		GP	Gasoline (I
Y	N	A	All Wheel Dr	VGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel I	FVGAT02.		15		GP	Gasoline (I
Y	N	A	All Wheel Dr	VGAT03.	0NU3		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	VGAT03.	0ALT	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	VGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	VGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	VGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	VGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV06.	0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV06.	0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV06.	0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Dri	VGAV06.	8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	VGAV08.	0GLB	15		GPR	Gasoline (Premium
t	A		All Wheel I	FVGAV06.		15		GPR	Gasoline (I
Y	N	A	All Wheel Dr	VGAV06.	5LLR	15		GPR	Gasoline (Premium
t	A		All Wheel I	FVGAV06.		15		GPR	Gasoline (I
Y	N	A	All Wheel Dr	VGAV05.	2NLE	15		GP	Gasoline (Premium

Y	N	F	2-Wheel Drive, Front	FVGAJ02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAJ02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
Unleaded Recommended)	Not exempt				86	12		
Unleaded Recommended)	Not exempt	79	10					
Unleaded Recommended)	Not exempt	79	10					
Unleaded Recommended)	Not exempt				86	10		
Unleaded Recommended)	Not exempt				91	12		
Unleaded Recommended)	Not exempt				91	12		
Unleaded Recommended)	Not exempt	84	12					
Unleaded Recommended)	Not exempt				98	16		
Unleaded Recommended)	Not exempt				98	16		
Unleaded Recommended)	Not exempt				98	16		
Unleaded Recommended)	Not exempt						94	25
Unleaded Recommended)	Not exempt				100	15		
Unleaded Recommended)	Not exempt				100	15		
Unleaded Recommended)	Not exempt				107	15		
Unleaded Recommended)	Not exempt				107	15		
Unleaded Recommended)	Not exempt				107	15		
Unleaded Recommended)	Not exempt				107	15		
Unleaded Recommended)	Not exempt						84	17
Unleaded Recommended)	Not exempt						84	17
Unleaded Recommended)	Truck							
Unleaded Recommended)	Truck							
Unleaded Recommended)	Truck							
Unleaded Recommended)	Truck							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt	84	13					
Unleaded Recommended)	Not exempt	81	10					
Unleaded Recommended)	Not exempt						94	25
Unleaded Recommended)	Not exempt				86	10		
Unleaded Recommended)	Not exempt				98	16		
Unleaded Recommended)	Not exempt						94	25
Unleaded Recommended)	Not exempt				100	15		
Unleaded Recommended)	Not exempt	74	13					
Unleaded Recommended)	Not exempt							
Unleaded Recommended)	Not exempt	89	11					
Unleaded Recommended)	Not exempt	89	11					
Unleaded Recommended)	Not exempt	86	7					
Unleaded Recommended)	Not exempt	86	7					
Unleaded Recommended)	Not exempt	102	13					
Unleaded Recommended)	Not exempt	102	13					
Unleaded Recommended)	Not exempt				101	11		
Unleaded Required)	Not exempt							
Unleaded Required)	Not exempt							
Unleaded Required)	Not exempt							
Unleaded Required)	Not exempt							
Unleaded Recommended)	Not exempt							

MRG Unleaded Recompregated)	miles per gallon	Not exempt	94	13					
MRG Unleaded Recompregated)	miles per gallon	Not exempt	94	13					
MRG Unleaded Recompregated)	miles per gallon	Not exempt	94	13					
MRG Unleaded Recompregated)	miles per gallon	Not exempt	77	11					
MRG Unleaded Recompregated)	miles per gallon	Not exempt						93	16
MRG Unleaded Recompregated)	miles per gallon	Not exempt						93	16
MRG Unleaded Recompregated)	miles per gallon	Not exempt			102	16			
MRG Unleaded Recompregated)	miles per gallon	Truck							
MRG Unleaded Recompregated)	miles per gallon	Truck							
MRG Unleaded (15 ppm, maximum)	miles per gallon	Truck							
MRG Unleaded Recompregated)	miles per gallon	Truck							

Annual Fu	EPA Calcu	Comment	City2 FE (U	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction							
2200	2200	refreshed release date, interior volume corrected							
2100	2100	carline interior volumes corrected from 2 door to 4 door							
2100	2100								
2200	2200								
2200	2200								
2050	2050								
2500	2500								
1950	1950								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2500	2500								
2500	2500	Eng division correction							
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200								
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							
2200	2200								
2200	2200								
3000	3000	release date change to March							
3800	3800		9	15	11			10.5	
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March							
3800	3800		9	15	11			10.5	
3350	3350	release date change to March							
3800	3800		9	15	11			10.5	
4400	4400								
5700	5700	eng code correction							
4400	4400								
4750	4750								
4400	4400								
3550	3550	Release date change							

2300	2300	
2300	2300	
2850	2850	
2300	2300	
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV
2050	2050	
2500	2500	
2500	2500	
2500	2500	
2450	2450	corrected fuel economy rating to 5
3000	3000	

Hwy2	UnadjCmb2	UrCmb2	UnrHwy2	UnrCmb2	Unr Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Alternative Fuel Fuel2 AnnCity CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	24		Compact C
				SIDI;	2	24		Compact Cars
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	21		Two Seaters
				SIDI;	2	24		Compact Cars
4250	711	410	576	4250 FFV;	2	24		Compact Cars
				SIDI;	2	23		Subcompact Cars
4250	726	421	589	4250 FFV;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
4250	726	421	589	4250 FFV;	2	25		Midsize Cars
					1	15		Midsize Cars
					2	21		Two Seaters
					2	21		Two Seate
					2	21		Two Seaters
					2	21		Two Seate
				SIDI & PFI;	2	21		Two Seaters

SIDI;	2	24	Compact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	23	Subcompact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	25	Midsize Cars
SIDI;	2	230	Small SUV 2WD
SIDI;	2	231	Small SUV 4WD
	2	233	Standard SUV 4W
SIDI;	2	233	Standard SUV 4W

SC Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	[illegible]	2/25/2014	15406	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15407	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15317	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	1/15/2014	15320	[redacted]	N	N		
car	Derived 5-cycle label		6/9/2014	15670	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15675	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15676	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15673	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15674	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/10/2014	15458	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/10/2014	15459	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15647	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15385	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15456	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15648	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15386	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15442	[redacted]	N	N		
car	Derived 5-cycle label		8/4/2014	15903	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	8/4/2014	15650	[redacted]	N	N		
	Vehicle Specific 5-cycle	[illegible]	6/10/2014	15460	[redacted]	N	N		
	Vehicle Specific 5-cycle	[illegible]	8/8/2014	15919	[redacted]	N	N		
D	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15408	[redacted]	N	N		
D	Derived 5-cycle label		6/9/2014	15711	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15493	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15497	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15601	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15598	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15492	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15496	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15600	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15597	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15589	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/19/2014	15590	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15577	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	8/4/2014	15651	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15576	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15575	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15400	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	1/15/2014	15302	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	1/15/2014	15303	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	3/28/2014	15558	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15654	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	3/28/2014	15557	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15661	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	3/28/2014	15559	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15659	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/1/2014	15737	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/23/2014	15692	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	7/8/2014	15678	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	7/8/2014	15681	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	7/8/2014	15682	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/12/2014	15599	[redacted]	N	N		

car	Vehicle Specific 5-cycle label	7/14/2014	15689	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N
D	Vehicle Specific 5-cycle label	8/15/2014	15417	[redacted]	N	N
D	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	2.0L Engine	N	Code CNTA, CXCA	Y	CONTINUO	US VARIABLE VALVE TIMING		
N	N	2.0L Engine	N	Code CNTA, CXCA	Y	CONTINUO	US VARIABLE VALVE TIMING		
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUO	US VARIABLE VALVE TIMING	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUO	US VARIABLE VALVE TIMING	
N	N		N		Y	CONTINUO	US VARIABLE VALVE TIMING	SYSTEM	
N	N		N		Y	CONTINUO	US VARIABLE VALVE TIMING	SYSTEM	
N	N		N		Y	CONTINUO	US VARIABLE VALVE TIMING	SYSTEM	
N	N		N		Y	CONTINUO	US VARIABLE VALVE TIMING	SYSTEM	
N	N		N		Y	CONTINUO	US VARIABLE VALVE TIMING	SYSTEM	
N	N		N		N	N			
N	N		N		N	N			
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology	SYSTEM	
N	N	Engine Code	Y	CTGA. A8 Deactiv	Y	Start Stop Tech	nology		
N	N		N		N	N			
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology	SYSTEM	
N	N	Engine Code	Y	CTGA. A8 Deactiv	Y	Start Stop Tech	nology		
N	N	Engine Code	Y	CTNA with 2 cylinder	deactivation	intake and E	xhaust cam timing is electronically con		
N	N	Engine Co	N		Y	CONTINU	N		
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUO	USLY VARIABLE VALVE TIMING		
N	N		N		N	N			
N	N	Engine Co	N		Y	CONTINU	Y	AUDI VAL	Battery(s)
N	N	Engine code	N	CNRB	N	N			
N	N	Engine Code	N	(CTWB)	Y	CONTINUO	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	CNDA	Y	CONTINUO	US INTAKE AND EXHAUST CAM ADJUST		
N	N	Engine Code	N	CNDA	Y	CONTINUO	US INTAKE AND EXHAUST CAM ADJUST		
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	Engine Code	N	CNDA	Y	CONTINUO	US INTAKE AND EXHAUST CAM ADJUST		
N	N	Engine Code	N	CNDA	Y	CONTINUO	US INTAKE AND EXHAUST CAM ADJUST		
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	Engine Code	N	: CFS	Y	Continuously	y intake and exhaust cam adjustment		
N	N	Engine Code	N	: CFS	Y	Continuously	y intake and exhaust cam adjustment		
N	N	Engine Code	Y	CRDB (RS7	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	N	CYFB - Audi S3	Y	CONTINUO	USLY VARIABLE Valve Timing - Exhaust		
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	Y	CYCA. 6.8	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUO	USLY VARIABLE VALVE TIMING		
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUO	USLY VARIABLE VALVE TIMING		
N	N	Engine Code	Y	CYCA. 6.8	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	N	CVAB. Bentley Cont	Y	ental GT / Co	NTINUOUSLY VARIABLE / M		
N	N	Engine Code	Y	CYCA. 6.8	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	N	CVAB. Bentley Cont	Y	ental GT / Co	NTINUOUSLY VARIABLE / M		
N	N	Engine Code	Y	CYCA. 6.8	Deactivation	of cylinder	2, 3, 5 and 8		
N	N	Engine Code	N	CVAB. Bentley Cont	Y	ental GT / Co	NTINUOUSLY VARIABLE / M		
N	N		Y	Cylinder de	activation	Variation of	number of cylinders in use		
N	N	Engine Code	N	(CBXA). CHARGE AIR	Y	COOLER (AIR/	AIR)		
N	N	Engine Co	Y	ELECTRO	Y	HYDRAUL	N		
N	N	Engine Code	Y	L539B (Audi	Cylinder	On Demand	)		
N	N	Engine Co	Y	ELECTRO	Y	HYDRAUL	N		
N	N	ENGINE CO	N	DE CSJA (Lamborghini	Y	Huracan / Hu	racan Spyder)		

N	N	N	Y	position of intake/exhaust camshaft electronically	
N	N	N	Y	position of intake/exhaust camshaft electronically	
N	N	N	Y	position of intake/exhaust camshaft electronically	
N	N	N	Y	CONTINUOUS VARIABLE VALVE TIMING	
N	N	2.0L Engine Code CNTC	Y	CONTINUOUS VARIABLE VALVE TIMING	
N	N	2.0L Engine Code CNTC	Y	CONTINUOUS VARIABLE VALVE TIMING	
N	N	Engine code: CDVB	Y	Electronic control / Hydraulic adjustment	
N	N	N	Y	position of intake/exhaust camshaft electronically	
N	N	N	Y	position of intake/exhaust camshaft electronically	
N	N	Engine Code: CNRB	N	N	
N	N	N	Y	INTAKE / EXHAUST CAM TIMING ADJUSTED HYDRAU	

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									
	1	Lithium Ion		266	5.00	37.0	On-Board		

alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces

alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
tolled and hydraulically adjusted.

EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
valves only
alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces

alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
ECHANICAL-HYDRAULIC
alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
ECHANICAL-HYDRAULIC
alves is a valve lift of zero (all valves are closed), but fuel injection and ignition are activated as neces
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.
C/HYDRAULIC
C/HYDRAULIC
RALVED CONTROL
ONTINUOUSLY VVT
ONTINUOUSLY VVT
RALVED CONTROL
ECHANICAL-HYDRAULIC

C/HYDRAULIC - This configuration is in the Bugatti Veyron and Grand Sport.

controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
Electrical F	Both	Y						1	AC Inducti
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit	n Direct Injection		N	5W40
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
		40		GDI	Spark Ignit	N	N	N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignit	n Direct Injection		N	5W40
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignit	n Direct Injection		N	5W40
				GDI	Spark Ignit	n Direct Injection		N	5W40
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 504 00
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 504 00
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 504 00
				MFI	Multipoint/sequential fuel injection			N	0W40 / VW50200
				MFI	Multipoint/sequential fuel injection			N	10W60 VW 50101
				MFI	Multipoint/s			N	5W30 VW
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 50400 /
				MFI	Multipoint/s			N	5W30 VW
				GDPI	Spark Ignition direct & ported injection			N	5W30 VW 50400

GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	50700 Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	50700 Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500 No	Auto(AM-S7)	Auto(AM-S7)						
N	50500 No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500 No	Auto(AM-S7)	Auto(AM-S7)						
N	50500 No	Manual(M6)	Manual(M6)						
N	50700 No	Auto(AM-S7)	Auto(AM-S7)						
N	50700 No	Auto(AM-S7)	Auto(AM-S7)						
N	50700 No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	50700 No	Auto(AM-S7)	Auto(AM-S7)						
N	50700 No	Auto(AM-S7)	Auto(AM-S7)						
N	50700 No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro					
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro					
N	50700 No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	50700 No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	50700 No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	VW50500 No	Auto(S8)	Auto(S8)						
N	50500 No	Auto(AM-S7)	Auto(AM-S7)						
Y	50700 Yes	Auto(AM-S	Auto(AM-S						
Y	50700 Yes	Auto(AM-S7)	Auto(AM-S7)						
N	50700 No	Auto(AM-S	Auto(AM-S	VENENO					
N	No	Auto(AM-S7)	Auto(AM-S7)						

N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[redacted]	EPA Calculated Gas G	[redacted]	[redacted] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.0APA	9		
36.2	[redacted]	7	7	FVGAV02.0APA	9		
34.3	[redacted]	6	6	FVGAV02.0APA	9		
35.2	[redacted]	7	7	FVGAV02.0APA	9		
35.4	[redacted]	7	7	FVGAV02.0AUB	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
36.9	[redacted]	7	7	FVGAV02.0AUB	5		
30.0	[redacted]	5	5	FVGAV02.0AUB	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
28.0	[redacted]	5	5	FVGAV04.0NUA	5		
36.9	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
27.6	[redacted]	5	5	FVGAV04.0NUA	5		
21.1	[redacted]	4	4	FVGAV06.3VUM	5		
30.0	[redacted]	5	5	FVGAV02.	5		
29.5	[redacted]	5	5	FVGAV02.0AUA	5		
34.3	[redacted]	7	5	FVGAJ03.0NU4	5		
34.0	[redacted]	6	6	FVGAT02.	5		
28.1	[redacted]	5	4	FVGAT03.0NU3	5		
23.1	[redacted]	4	4	FVGAT03.0ALT	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
22.8	[redacted]	4	4	FVGAV04.2NLB	5		
22.6	[redacted]	4	4	FVGAV04.2NLB	5		
24.1	[redacted]	4	4	FVGAV04.0NUA	5		
33.2	[redacted]	6	6	FVGAV02.0AUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.0	[redacted]	5	5	FVGAV04.0NUA	5		
33.3	[redacted]	6	6	FVGAV02.0AUA	5		
33.3	[redacted]	6	6	FVGAV02.0AUA	5		
23.7	[redacted]	4	4	FVGAV04.0NUA	5		
19.5	[redacted]	3	3	FVGAV06.0VLN	5		
21.9	[redacted]	4	4	FVGAV04.0NUA	5		
18.3	[redacted]	3	3	FVGAV06.0VLN	5		
21.9	[redacted]	4	4	FVGAV04.0NUA	5		
18.3	[redacted]	3	3	FVGAV06.0VLN	5		
15.9	[redacted]	1	1	FVGAV06.8ELP	5		
12.6	[redacted]	1	1	FVGAV08.0GLB	5		
16.4	[redacted]	1	1	FVGAV06.	5		
14.6	[redacted]	1	1	FVGAV06.5LLR	5		
15.8	[redacted]	1	1	FVGAV06.	5		
20.0	[redacted]	3	3	FVGAV05.2NLE	5		

32.2	[redacted]	6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

FVGAV02.0VPE	7
FVGAV02.0VPE	7

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
	0		398	277	343			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
	1250		416	267	349			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1500	451	312	389			
		1500	446	316	387			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			
	0		395	284	345			
	0		395	284	345			
		4000	580	347	475			
		8000	710	421	580			
		5750	638	370	517			
		8000	736	443	604			
		5750	638	370	517			
		8000	736	443	604			
		11000	840	501	688			
		17500	1050	599	847			
		11000	836	481	676			
		12750	902	547	742			
		11000	831	523	692			
		6750	629	441	544			

	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
750		358	271	319
750		355	258	311
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	Combined CO2 value (as shown on Label)		
[illegible]	[illegible]	[illegible]	City CO2	Hwy CO2	240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5
289.0	188.0	243.6	362.1	255.5	314.1
305.0	200.0	257.8	378.6	280.1	334.3
294.0	198.0	250.8	366.0	271.0	323.2
292.0	199.0	250.2	373.7	280.2	331.6
321.2	202.4	267.7	398.0	276.6	343.4
321.2	202.4	267.7	398.0	276.6	343.4
282.0	189.0	240.2	360.0	272.0	320.4
358.0	219.0	295.4	452.0	306.0	386.3
331.0	194.0	269.4	415.7	267.3	348.9
331.0	194.0	269.4	415.7	267.3	348.9
376.5	225.0	308.3	473.4	302.9	396.7
391.0	224.0	315.9	483.9	299.0	400.7
339.0	198.0	275.6	425.6	280.1	360.1
376.5	225.0	308.3	473.4	302.9	396.7
396.0	226.0	319.5	492.3	309.7	410.1
515.0	310.0	422.8	640.3	403.3	533.6
357.5	233.0	297.0	451.0	312.5	388.7
357.0	230.0	299.9	445.6	315.7	387.1
348.0	231.0	295.4	430.5	328.5	384.6
380.0	223.0	309.4	369.0	298.0	337.0
446.0	260.0	362.3	541.0	369.0	463.6
458.0	295.0	384.6	569.6	409.5	497.6
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
466.0	296.0	389.5	562.0	379.0	479.6
463.0	307.0	392.8	558.0	398.0	486.0
467.0	253.0	370.7	573.0	336.1	466.4
311.0	214.0	267.4	381.4	289.2	339.9
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
708.0	392.0	565.8	831.0	523.0	692.4
524.0	346.0	443.9	628.6	441.0	544.2

327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	[illegible]	Comb Vol Higher	Final Label	EPA_FUEL	EPA_GHG	EPA_AMT
	N	3.7	3.7			
	N	3.6	3.6			
	N	3.8	3.8			
	N	3.7	3.7			
	N	3.7	3.7			
	N	3.8	3.8			
	N	3.8	3.8			
	N	3.6	3.6			
	N	4.3	4.3			
	N	3.4	3.4			
	N	3.4	3.4			
	N	4.5	4.5			
	N	4.5	4.5			
	N	3.6	3.6			
	N	4.5	4.5			
	N	4.5	4.5			
	N	5.9	5.9			
	N	4.3	4.3			
	N	4.3	4.3			
	N	3.7	3.7			
	N	3.8	3.8			
	N	4.5	4.5			
	N	5.6	5.6			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.6	5.6			
	N	5.6	5.6			
	N	5.3	5.3			
	N	3.8	3.8			
	N	5.0	5.0			
	N	5.0	5.0			
	N	5.0	5.0			
	N	3.8	3.8			
	N	3.8	3.8			
	N	5.3	5.3			
	N	6.7	6.7			
	N	5.9	5.9			
	N	6.7	6.7			
	N	5.9	5.9			
	N	6.7	6.7			
	N	7.7	7.7			
	N	10.0	10.0			
	N	7.7	7.7			
	N	8.3	8.3			
	N	7.7	7.7			
	N	6.2	6.2			

N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.6	3.6
N	3.6	3.6
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

| [illegible] | [illegible] | [illegible] |

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 5/30/2014 10:49:28 AM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

Thanks Dave. The errors were corrected in Verify today and should be good now.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, May 29, 2014 5:42 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

Attached are the data in Verify as of May 28, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on June 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Fri 5/30/2014 12:49:28 PM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014 [Thanks] NNTO

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Friday, May 30, 2014 6:49 AM
To: Good, David
Cc: Snyder, Jim
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

Thanks Dave. The errors were corrected in Verify today and should be good now.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, May 29, 2014 5:42 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of May 28, 2014

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Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Bunker, Byron[bunker.byron@epa.gov]; Olechiw, Michael[olechiw.michael@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: John German
Sent: Fri 5/30/2014 12:58:30 PM
Subject: Fwd: WVU report on LDV diesel PEMS testing
PastedGraphic-2.pdf
ATT00001.htm
WVU - PEMS diesel testing report for ICCT_Final - May2014.pdf
ATT00002.htm

FYI. I am forwarding the email I sent to Ex. 7 of VW. Ex. 7 responded, saying he is on a trip this week and will contact me next week.
Also attached is the final WVU report. It hasn't been released yet, so please keep it within EPA for the time being (it should be released soon).

John

Begin forwarded message:

From: John German <john@theicct.org>
Subject: WVU report on LDV diesel PEMS testing
Date: May 28, 2014 1:45:25 PM EDT
To: Ex. 7

Ex. 7

Attached is WVU's final report on the 3 LDV diesel vehicles they tested, using PEMS. It hasn't been released yet, so please keep it within VW for the time being, but I thought you would appreciate a heads-up. It should be released publicly soon, although we do not intend to make a big press release out of the report. We plan on posting it on our website and letting it go into our RSS feed, but nothing more -- no publication announcement, no blogs, no twittering.

We have been discussing internally why the VW vehicles had such high emissions in-use. One thought was that in-use driving had higher loads and, thus, might be exceeding the capacity of the NOx control systems or the systems might not be calibrated as well at higher loads. However, the US06 test results for NOx at CARB were much lower than the in-use highway route (#1) used for the PEMS testing, even though the acceleration rates (Figure 3.12 in the report) and the CO2 emissions were much higher on the US06 than on the in-use highway route. In addition, the in-use urban routes (#2- LA, #4-SD, #5-SF) had NOx emissions 2-3 times higher than the in-use highway route.

Another thought is that the catalyst might not be getting hot enough to work properly in-use, similar to the in-use HD diesel NOx issue. The problem I have with this theory is that NOx emissions over NEDC testing at CARB were quite low.
The following table compares the chassis dyno test data from the CARB logs (FTP, NEDC, US06) with the WVU PEMS results from Tables 4.3 and 4.6 of the report:

To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Fri 5/30/2014 1:23:03 PM
Subject: FW: [Fueleconomy] Mistake on fuleeconomy.gov website - 2015 Audi A3 models
ATT00001.txt

Richard,

Please let me know what you think about this customer's email.

If he is correct, please revise Verify when you get a chance.

Thanks

Dave

From: FuelEconomy [mailto:fueleconomy@ornl.gov]
Sent: Thursday, May 29, 2014 4:34 PM
To: Good, David
Subject: FW: [Fueleconomy] Mistake on fuleeconomy.gov website

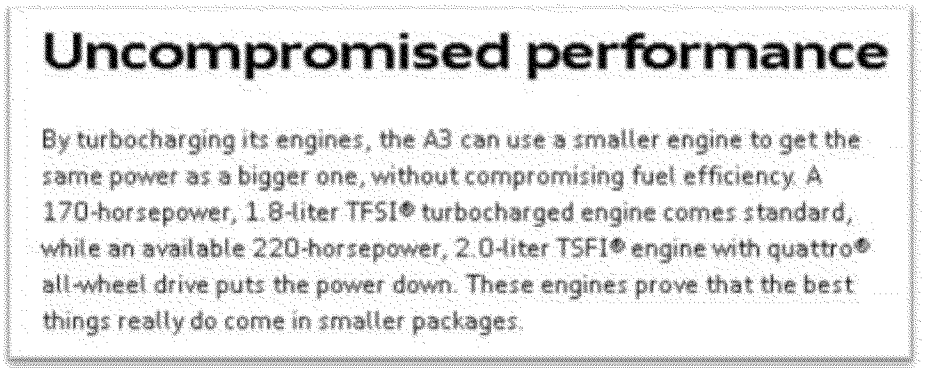
Hi Dave,

Mr. **Ex. 6** is referring to the 2015 Audi A3 models on our website:

http://www.fueleconomy.gov/feg/Find.do?action=sbs&id=34710&id=34771

The information on the official Audi website would suggest that the 2.0 L engine should be associated with the A3 Quattro while the 1.8 L engine is associated with the standard A3:

http://www.audiusa.com/models/audi-a3-sedan



Could you please let us know if a correction is needed? We appreciate the help.

Bob Boundy

Roltek, Inc., Supporting:

Oak Ridge National Laboratory

www.fueleconomy.gov

Email: boundyrg@ornl.gov

Phone: (856) 850-0766

From: Ex. 6 @yahoo.com]
Sent: Thursday, May 29, 2014 2:47 PM
To: FuelEconomy
Subject: [Fueleconomy] Mistake on fuleeconomy.gov website

To whom it may concern:

The Audi A3 Quattro comes with the 2.0 L turbocharged engine and all-wheel drive. While the standard Audi A3 comes with the 1.8 L turbocharged engine and front-wheel drive. Here is a link to the mistake: http://www.fueleconomy.gov/feg/Find.do?action=sbs&id=34771&id=34710 and here is a link to the Audi website: http://www.audiusa.com/models/audi-a3-sedan stating that the "...1.8-liter TFSI® turbocharged engine comes standard, while an available 220-horsepower, 2.0-liter TSFI® engine with quattro® all-wheel drive..."

With Regards,

Ex. 6

Uncompromised performance

By turbocharging its engines, the A3 can use a smaller engine to get the same power as a bigger one, without compromising fuel efficiency. A 170-horsepower, 1.8-liter TFSI® turbocharged engine comes standard, while an available 220-horsepower, 2.0-liter TSFI® engine with quattro® all-wheel drive puts the power down. These engines prove that the best things really do come in smaller packages.

VW FOIA, EPA 06/20/2017 2017-FFP_012643

To: Zaremski, Sara[zaremski.sara@epa.gov]; Danzeisen, Karen[Danzeisen.Karen@epa.gov]; Good, David[good.david@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov]
From: Ken.Katz@dot.gov
Sent: Fri 5/30/2014 1:27:20 PM
Subject: RE: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Sara, Karen, Dave and Bob,

I apologize for not reviewing the spreadsheet earlier. I must have mistakenly deleted it.

I like the changes and believe that this structure will allow both agencies to get the information that we both need in the most efficient manner.

I especially like the modification that allows different base tire sizes for the front and rear axles. I don't anticipate the need for manufacturers to provide both sets of data that frequently, but we are all aware that quite a few sports cars and SUVs are equipped with different front and rear tire sizes. Bravo for recognizing the need for that separation.

I approve of the spreadsheet as modified.

On a related issue, I have verified that our Administrator has agreed with our Chief Counsel's office that VW and Porsche will be combined for CAFE compliance purposes beginning with MY 2012. A formal letter to the companies is being drafted and hopefully will be sent out within a week or so. On our side, we will change the manufacturer/brand relationship to have Porsche as brand of VW starting with MY 2012. I believe that Sara said that we'd get the final data for both the companies through the webservice later this year after the companies resubmit the data. When that data is ready, if we can get a notification that would be appreciated. We are designing the database so that we would get an automatic notification when new data is available, but I'm not sure if it will be ready for our production environment by the time the VW data is available.

I appreciate our good working relationship and hope that it continues in the future.

Thanks!

Ken Katz

From: Zaremski, Sara [mailto:zaremski.sara@epa.gov]
Sent: Thursday, May 29, 2014 9:44 AM
To: Katz, Ken (NHTSA)
Subject: FW: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

From: Danzeisen, Karen
Sent: Tuesday, May 20, 2014 2:07 PM
To: Ken.Katz@dot.gov
Cc: Good, David; Zaremski, Sara; Poirier, Christi; Peavyhouse, Robert
Subject: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Hello Ken,

Dave Good is away from the office until next Wednesday but he did manage to update the spreadsheet (see attached) based on the discussion we had last week. His changes are the cells shaded in yellow. I made some further edits which are shaded in green. Even though he's away we'd like to push this along if we can so that we can get it to our contractor. Therefore, could

you please review the updates and make sure everything is to your liking? I kept the strikethroughs in the document so you could better see what changed. Once we finalize everything I'll remove those strikethroughs and re-number the data elements so that they are sequential once again.

If you have any questions or would like me to go through it with you just let me know.

Thank you,

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

To: Ken.Katz@dot.gov[Ken.Katz@dot.gov]; Danzeisen, Karen[Danzeisen.Karen@epa.gov]; Good, David[good.david@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov]
From: Zaremski, Sara
Sent: Fri 5/30/2014 1:32:49 PM
Subject: RE: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Thanks for the follow up. We will let you know timing of implementing these changes.

For the notifications on VW, we will let you know when the data is there for you. Until you let us know otherwise, we will also let you know when other (2012 toyota car, 2013 MY all) datasets have completed our process and become available for you to pick up.

sara

From: Ken.Katz@dot.gov [mailto:Ken.Katz@dot.gov]
Sent: Friday, May 30, 2014 9:27 AM
To: Zaremski, Sara; Danzeisen, Karen; Good, David; Peavyhouse, Robert
Cc: Maurice.Hicks@dot.gov
Subject: RE: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Sara, Karen, Dave and Bob,

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Thanks!

Ken Katz

From: Zaremski, Sara [mailto:zaremski.sara@epa.gov]
Sent: Thursday, May 29, 2014 9:44 AM
To: Katz, Ken (NHTSA)
Subject: FW: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

From: Danzeisen, Karen
Sent: Tuesday, May 20, 2014 2:07 PM
To: Ken.Katz@dot.gov
Cc: Good, David; Zaremski, Sara; Poirier, Christi; Peavyhouse, Robert
Subject: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Hello Ken,

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Thank you,

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov

(734)214-4444

www.epa.gov/nvfel/

To: Zaremski, Sara[zaremski.sara@epa.gov]; Danzeisen, Karen[Danzeisen.Karen@epa.gov]; Good, David[good.david@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov]
From: Ken.Katz@dot.gov
Sent: Fri 5/30/2014 1:36:26 PM
Subject: RE: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Sara,

That sounds great!

By the way, we are planning on several demos for our management team in the next month or so and we'll be showing them how we can pull data from the webservice and load it in with a few steps. Hopefully, they'll be impressed.

Ken

From: Zaremski, Sara [mailto:zaremski.sara@epa.gov]
Sent: Friday, May 30, 2014 9:33 AM
To: Katz, Ken (NHTSA); Danzeisen, Karen; Good, David; Peavyhouse, Robert
Cc: Hicks, Maurice (NHTSA)
Subject: RE: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Thanks for the follow up. We will let you know timing of implementing these changes.

For the notifications on VW, we will let you know when the data is there for you. Until you let us know otherwise, we will also let you know when other (2012 toyota car, 2013 MY all) datasets have completed our process and become available for you to pick up.

sara

From: Ken.Katz@dot.gov [mailto:Ken.Katz@dot.gov]
Sent: Friday, May 30, 2014 9:27 AM
To: Zaremski, Sara; Danzeisen, Karen; Good, David; Peavyhouse, Robert
Cc: Maurice.Hicks@dot.gov
Subject: RE: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Sara, Karen, Dave and Bob,

I apologize for not reviewing the spreadsheet earlier. I must have mistakenly deleted it.

I like the changes and believe that this structure will allow both agencies to get the information that we both need in the most efficient manner.

I especially like the modification that allows different base tire sizes for the front and rear axles. I don't anticipate the need for manufacturers to provide both sets of data that frequently, but we are all aware that quite a few sports cars and SUVs are equipped with different front and rear tire sizes. Bravo for recognizing the need for that separation.

I approve of the spreadsheet as modified.

On a related issue, I have verified that our Administrator has agreed with our Chief Counsel's office that VW and Porsche will be combined for CAFE compliance purposes beginning with MY 2012. A formal letter to the companies is being drafted and hopefully will be sent out within a week or so. On our side, we will change the manufacturer/brand relationship to have Porsche as brand of VW starting with MY 2012. I believe that Sara said that we'd get the final data for both the companies through the webservice later this year after the companies resubmit the data. When that data is ready, if we can get a notification that would be appreciated. We are designing the database so that we would get an automatic notification when new data is available, but I'm not sure if it will be ready for our production environment by the time the VW data is available.

I appreciate our good working relationship and hope that it continues in the future.

Thanks!

Ken Katz

From: Zaremski, Sara [mailto:zaremski.sara@epa.gov]
Sent: Thursday, May 29, 2014 9:44 AM
To: Katz, Ken (NHTSA)
Subject: FW: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

From: Danzeisen, Karen
Sent: Tuesday, May 20, 2014 2:07 PM
To: Ken.Katz@dot.gov
Cc: Good, David; Zaremski, Sara; Poirier, Christi; Peavyhouse, Robert
Subject: NHTSA CAFE Veh Classification info additions to Verify LD Footprint module

Hello Ken,

Dave Good is away from the office until next Wednesday but he did manage to update the spreadsheet (see attached) based on the discussion we had last week. His changes are the cells shaded in yellow. I made some further edits which are shaded in green. Even though he's away we'd like to push this along if we can so that we can get it to our contractor. Therefore, could

you please review the updates and make sure everything is to your liking? I kept the strikethroughs in the document so you could better see what changed. Once we finalize everything I'll remove those strikethroughs and re-number the data elements so that they are sequential once again.

If you have any questions or would like me to go through it with you just let me know.

Thank you,

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

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(734)214-4444

www.epa.gov/nvfel/

CAFE/GHG Draft Calculation Information Report

Manufacturer Name:	Volkswagen	**Manufacturer Code:**	VWX
Model Year:	2012	**Compliance Category:**	Light Trucks

Calculation Summary

	CAFE		GHG		TLAAS	
	Mfr	**Verify**	**Mfr**	**Verify**	**Mfr**	**Verify**
Baseline Calculation:						
Unrounded	27.4071	27.4071	330.3339	330.0024	--	--
Rounded	27.4	27.4	330	330	--	--
Final Calculation:						
Unrounded	27.4071	27.4071	330.3339	330.0024	--	--
Rounded	27.4	27.4	330	330	--	--
Final Production Volume	64882	64882	64882	64882	--	--
Official Value	27.4	27.4	330	330	--	--
Unrounded Reformed Standard	26.9049	26.9049	326.5	326.5	--	--
Rounded Reformed Standard	--	26.9	--	327	--	--

Calculation Method:	CREE
Mfr Final Status:	Yes
Reformed Standard Comment:	--
CAFE/GHG Calculation Errors:	--

Model Type CAFE Calculations

							Baseline Fuel			Dual Fuel / Alt Fuel			Final Calculation		
Mfr Cd	**MT Index**	**Dom/Imp**	**Div**	**CL**	**Prd Vol**	**Test Vol**	**City**	**Hwy**	**Comb**	**City**	**Hwy**	**Comb**	**City**	**Hwy**	**Comb**
ADX	35	Import	1	330	Ex. 4 - CBI		24.6	35.9	28.6594	--	--	--	24.6	35.9	28.6594
ADX	36	Import	1	330			22.7	30.7	25.7155	--	--	--	22.7	30.7	25.7155
ADX	47	Import	2	140			23.4	40.7	28.9345	--	--	--	23.4	40.7	28.9345
ADX	72	Import	1	320			21.2	36	26.0123	--	--	--	21.2	36	26.0123
ADX	77	Import	1	320			19.2458	29.8077	22.8967	--	--	--	19.2458	29.8077	22.8967
ADX	82	Import	2	165			26.8566	37.4347	30.7692	--	--	--	26.8566	37.4347	30.7692
VWX	59	Import	1	145			25.1	33.1	28.1631	--	--	--	25.1	33.1	28.1631
VWX	81	Import	1	140			21.3	31.6	24.9612	--	--	--	21.3	31.6	24.9612

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Light Trucks

Model Type GHG Calculations

							Baseline Fuel			Dual Fuel / Alt Fuel			Final Calculation		
Mfr Cd	MT Index	TLAAS	Div	CL	Prd Vol	Test Vol	City	Hwy	Comb	City	Hwy	Comb	City	Hwy	Comb
ADX	35	No	1	330	Ex. 4 - CBI		360	247	309.2	--	--	--	360	247	309.2
ADX	36	No	1	330			389	287	343.1	--	--	--	389	287	343.1
ADX	47	No	2	140			434	250	351.2	--	--	--	434	250	351.2
ADX	72	No	1	320			479	283	390.8	--	--	--	479	283	390.8
ADX	77	No	1	320			463.2	298.9	389.3	--	--	--	463.2	298.9	389.3
ADX	82	No	2	165			331	237.2	288.8	--	--	--	331	237.2	288.8
VWX	59	No	1	145			354	268	315.3	--	--	--	354	268	315.3
VWX	81	No	1	140			417	281	355.8	--	--	--	417	281	355.8

Model Type Calculation Errors

Footprint Based Standards Calculations

					Reformed CAFE Standard			Greenhouse Gas Standard		
Mfr Cd	Div	CL	FP Index	Footprint Description	Trgt FE	Cmpl Cat	Prd Vol	Trgt GHG	GHG Vol	TLAAS
ADX	1	320	1	Q7 265/50R19	25.56	Import	6844	343.9	6844	--
ADX	1	320	2	Q7 275/45R20	25.53	Import	2107	344.3	2107	--
ADX	1	330	1	Q5 235/60R18	26.97	Import	21506	325.8	21506	--
ADX	1	330	2	Q5 2.0L 235/60R18	26.97	Import	12374	325.8	12374	--
ADX	2	140	1	Touareg TDI 255/5R18	26.04	Import	5528	337.5	5528	--
ADX	2	165	1	Tiguan 4Motion 235/50R18 low roll	28.8	Import	7434	304.7	7434	--
ADX	2	165	2	Tiguan 4Motion 215/65R16	28.61	Import	4166	306.8	4166	--
VWX	1	140	1	Touareg 255/55R18	26.04	Import	4618	337.5	4618	--
VWX	1	145	1	Touareg Hybrid 265/50R19	26.16	Import	305	335.9	305	--

CAFE/GHG Draft Calculation Information Report

Manufacturer Name:	Volkswagen	**Manufacturer Code:**	VWX
Model Year:	2012	**Compliance Category:**	Passenger Vehicles

Calculation Summary

	CAFE Domestic		CAFE Import		GHG		GHG TLAAS	
	Mfr	**Verify**	**Mfr**	**Verify**	**Mfr**	**Verify**	**Mfr**	**Verify**
Baseline Calculation:								
Unrounded Unadjusted	33.4335	33.4335	32.9492	32.9492	273.667	273.6587	--	--
Unrounded Adjusted (TPA)	33.6676	33.6676	33.1948	33.1949	N/A	N/A	N/A	N/A
Rounded Adjusted (TPA)	33.7	33.7	33.2	33.2	274	274	--	--
Final Calculation:								
Unrounded Unadjusted	33.4335	33.4335	33.0766	33.0766	272.7599	272.7516	--	--
Unrounded Adjusted (TPA)	33.6676	33.6676	33.3231	33.3232	N/A	N/A	N/A	N/A
Rounded Adjusted (TPA)	33.7	33.7	33.3	33.3	273	273	--	--
Final Production Volume	95583	95583	405107	405107	500690	500690	--	--
Official Value	33.7	33.7	33.3	33.3	273	273	--	--
Unrounded Reformed Standard	32.1479	32.1479	33.674	33.6787	263.1	263.1	--	--
Rounded Reformed Standard	--	32.1	--	33.7	--	263	--	--

Calculation Method:	CREE
Mfr Final Status:	Yes
Reformed Standard Comment:	--
CAFE/GHG Calculation Errors:	--

CAFE/GHG Draft Calculation Information Report

Manufacturer Name:	Volkswagen	**Manufacturer Code:**	VWX
Model Year:	2012	**Compliance Category:**	Passenger Vehicles

Model Type CAFE Calculations

VW FOIA, EPA

06/20/2017

2017-FFP_012658

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Passenger Vehicles

							Baseline Fuel			Dual Fuel / Alt Fuel			Final Calculation		
Mfr Cd	MT Index	Dom/Imp	Div	CL	Prd Vol	Test Vol	City	Hwy	Comb	City	Hwy	Comb	City	Hwy	Comb
ADX	3	Import	2	293			27.0121	42.7212	32.368	--	--	--	27.0121	42.7212	32.368
ADX	4	Import	2	293			25.7135	41.7856	31.0956	--	--	--	25.7135	41.7856	31.0956
ADX	9	Import	1	80			31.4	46.9	36.8857	--	--	--	31.4	46.9	36.8857
ADX	10	Import	1	70			22.9	37.4	27.7396	--	--	--	22.9	37.4	27.7396
ADX	11	Import	1	75			23.1	37.5	27.9255	--	--	--	23.1	37.5	27.9255
ADX	20	Import	1	10			29.2669	42.8335	34.1316	--	--	--	29.2669	42.8335	34.1316
ADX	21	Import	1	51			29.2669	42.8335	34.1316	--	--	--	29.2669	42.8335	34.1316
ADX	29	Import	1	20			26.0806	39.7929	30.867	--	--	--	26.0806	39.7929	30.867
ADX	30	Import	1	40			26.0806	39.7929	30.867	--	--	--	26.0806	39.7929	30.867
ADX	31	Import	1	25			26.0806	39.7929	30.867	--	--	--	26.0806	39.7929	30.867
ADX	32	Import	1	53			26.0806	39.7929	30.867	--	--	--	26.0806	39.7929	30.867
ADX	33	Import	1	20			27.628	42.4302	32.7729	--	--	--	27.628	42.4302	32.7729
ADX	34	Import	1	40			27.628	42.4302	32.7729	--	--	--	27.628	42.4302	32.7729
ADX	37	Import	1	30			21.6	35	26.096	--	--	--	21.6	35	26.096
ADX	38	Import	1	56			20.3	34	24.7961	--	--	--	20.3	34	24.7961
ADX	39	Import	1	30			21.5	34.1	25.7879	--	--	--	21.5	34.1	25.7879
ADX	40	Import	1	92			15.5398	24.5419	18.612	--	--	--	15.5398	24.5419	18.612
ADX	41	Import	1	90			15.5398	24.5419	18.612	--	--	--	15.5398	24.5419	18.612
ADX	42	Import	1	92			13.7	23.5099	16.8671	--	--	--	13.7	23.5099	16.8671
ADX	43	Import	1	90			13.7	23.5099	16.8671	--	--	--	13.7	23.5099	16.8671
ADX	44	Import	2	211			29.8054	43.2753	34.6601	--	--	--	29.8054	43.2753	34.6601
ADX	56	Import	1	42			17.3	29.3	21.2088	--	--	--	17.3	29.3	21.2088
ADX	57	Import	1	42			20.4	31	24.1098	--	--	--	20.4	31	24.1098
ADX	60	Import	1	96			21.7	35.2	26.2263	--	--	--	21.7	35.2	26.2263
ADX	61	Import	1	95			21.7	35.2	26.2263	--	--	--	21.7	35.2	26.2263
ADX	62	Import	3	406			16.1	25.4	19.276	--	--	--	16.1	25.4	19.276
ADX	63	Import	3	426			16	25.4	19.197	--	--	--	16	25.4	19.197
ADX	64	Import	3	406			14	24	17.2308	--	--	--	14	24	17.2308
ADX	66	Import	1	92			16.0427	27.4569	19.7344	--	--	--	16.0427	27.4569	19.7344
ADX	67	Import	1	65			25.3	40.3	30.3902	--	--	--	25.3	40.3	30.3902
ADX	68	Import	1	65			26.6	38.2	30.8102	--	--	--	26.6	38.2	30.8102
ADX	69	Import	1	66			27.2	37.1	30.9119	--	--	--	27.2	37.1	30.9119
ADX	70	Import	1	37			28.174	41.7864	33.0135	--	--	--	28.174	41.7864	33.0135
ADX	71	Import	1	38			28.174	41.7864	33.0135	--	--	--	28.174	41.7864	33.0135
ADX	73	Import	1	90			16.0427	27.4569	19.7344	--	--	--	16.0427	27.4569	19.7344
ADX	74	Import	1	92			13.6735	24.6004	17.0893	--	--	--	13.6735	24.6004	17.0893

Ex. 4 - CBI

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Passenger Vehicles

ADX	75	Import	1	90		13.6735	24.6004	17.0893	--	--	--	13.6735	24.6004	17.0893
ADX	80	Import	1	61		21.2	34.2	25.5746	--	--	--	21.2	34.2	25.5746
ADX	83	Import	2	160		27.2963	37.1906	31.0086	--	--	--	27.2963	37.1906	31.0086
ADX	84	Import	2	160		21.7	35.8	26.3745	--	--	--	21.7	35.8	26.3745
ADX	89	Import	2	212		23.9	37.1	28.456	--	--	--	23.9	37.1	28.456
ADX	165	Import	3	426		13	22.6	16.0722	--	--	--	13	22.6	16.0722
BEX	8	Import	1	15		12.7	23.4	15.9903	--	--	--	12.7	23.4	15.9903
BEX	12	Import	1	40		13.7	24.6	17.112	9.5	17.3	11.9181	22.527	40.5507	28.1593
BEX	13	Import	1	55		13.9	24.7	17.3049	10.3	17.2	12.569	23.1199	40.6448	28.6857
BEX	14	Import	1	35		13.9	24.7	17.3049	10.3	17.2	12.569	23.1199	40.6448	28.6857
BEX	88	Import	1	45		13.7	24.6	17.112	9.5	17.3	11.9181	22.527	40.5507	28.1593
BGT	85	Import	1	500		10	17.9	12.4782	--	--	--	10	17.9	12.4782
NLX	7	Import	1	475		12.5	22.7	15.6681	--	--	--	12.5	22.7	15.6681
VWX	1	Domestic	1	280		26.9263	40.6206	31.7418	--	--	--	26.9263	40.6206	31.7418
VWX	2	Domestic	1	280		26.2361	43.3967	31.9153	--	--	--	26.2361	43.3967	31.9153
VWX	5	Import	1	216		27.5	41.5	32.4219	--	--	--	27.5	41.5	32.4219
VWX	16	Import	2	96		16.7	28.3	20.477	--	--	--	16.7	28.3	20.477
VWX	17	Import	1	221		29.4666	44.897	34.8576	--	--	--	29.4666	44.897	34.8576
VWX	18	Import	1	221		26.5443	45.0964	32.5746	--	--	--	26.5443	45.0964	32.5746
VWX	19	Domestic	1	280	**Ex. 4 - CBI**	23.9	37.3	28.5088	--	--	--	23.9	37.3	28.5088
VWX	22	Import	1	225		27.6217	42.4797	32.7814	--	--	--	27.6217	42.4797	32.7814
VWX	23	Import	1	221		27.6217	42.4797	32.7814	--	--	--	27.6217	42.4797	32.7814
VWX	24	Import	1	206		27.6217	42.4797	32.7814	--	--	--	27.6217	42.4797	32.7814
VWX	25	Import	1	230		27.172	38.8543	31.4237	--	--	--	27.172	38.8543	31.4237
VWX	26	Import	1	225		26.2168	44.2259	32.0986	--	--	--	26.2168	44.2259	32.0986
VWX	27	Import	1	221		26.2168	44.2259	32.0986	--	--	--	26.2168	44.2259	32.0986
VWX	28	Import	1	206		26.2168	44.2259	32.0986	--	--	--	26.2168	44.2259	32.0986
VWX	45	Import	1	230		26.5	41.7262	31.7065	--	--	--	26.5	41.7262	31.7065
VWX	46	Import	2	211		25.9213	41.0913	31.0855	--	--	--	25.9213	41.0913	31.0855
VWX	48	Domestic	1	280		38.2	62.8	46.3746	--	--	--	38.2	62.8	46.3746
VWX	49	Import	1	225		37.6	56.2	44.1798	--	--	--	37.6	56.2	44.1798
VWX	50	Import	1	221		39.0595	59.3797	46.1693	--	--	--	39.0595	59.3797	46.1693
VWX	51	Import	1	206		39.0595	59.3797	46.1693	--	--	--	39.0595	59.3797	46.1693
VWX	52	Import	2	65		39.0595	59.3797	46.1693	--	--	--	39.0595	59.3797	46.1693
VWX	53	Import	1	225		38.778	60.3377	46.2079	--	--	--	38.778	60.3377	46.2079
VWX	54	Import	1	221		38.778	60.3377	46.2079	--	--	--	38.778	60.3377	46.2079
VWX	55	Import	1	206		38.778	60.3377	46.2079	--	--	--	38.778	60.3377	46.2079
VWX	58	Import	1	298		20.5	33.5	24.8373	--	--	--	20.5	33.5	24.8373

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Passenger Vehicles

VWX	76	Domestic	1	280		37.9	56.8	44.5744	--	--	--	37.9	56.8	44.5744
VWX	78	Import	1	221		28.1	41.499	32.8768	--	--	--	28.1	41.499	32.8768
VWX	79	Import	1	221		28.8	46.2	34.6771	--	--	--	28.8	46.2	34.6771
VWX	86	Import	2	230		25.4597	41.4194	30.8003	--	--	--	25.4597	41.4194	30.8003
VWX	87	Import	1	230		26.3336	42.6003	31.7973	--	--	--	26.3336	42.6003	31.7973
VWX	90	Import	1	235		26.3255	37.8827	30.5147	--	--	--	26.3255	37.8827	30.5147
VWX	91	Import	1	235		26.8	40.6	31.6394	--	--	--	26.8	40.6	31.6394

Ex. 4 - CBI

Manufacturer Name:	Volkswagen	**Manufacturer Code:**	VWX
Model Year:	2012	**Compliance Category:**	Passenger Vehicles

Model Type GHG Calculations

VW FOIA, EPA 06/20/2017 2017-FFP_012662

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Passenger Vehicles

							Baseline Fuel			Dual Fuel / Alt Fuel			Final Calculation		
Mfr Cd	MT Index	TLAAS	Div	CL	Prd Vol	Test Vol	City	Hwy	Comb	City	Hwy	Comb	City	Hwy	Comb
ADX	3	No	2	293			327.3	206.6	273	--	--	--	327.3	206.6	273
ADX	4	No	2	293			345.1	212.7	285.6	--	--	--	345.1	212.7	285.6
ADX	9	No	1	80			283	189	240.7	--	--	--	283	189	240.7
ADX	10	No	1	70			389	239	321.5	--	--	--	389	239	321.5
ADX	11	No	1	75			385	238	318.8	--	--	--	385	238	318.8
ADX	20	No	1	10			303.2	207.2	260	--	--	--	303.2	207.2	260
ADX	21	No	1	51			303.2	207.2	260	--	--	--	303.2	207.2	260
ADX	29	No	1	20			340.1	222.9	287.4	--	--	--	340.1	222.9	287.4
ADX	30	No	1	40			340.1	222.9	287.4	--	--	--	340.1	222.9	287.4
ADX	31	No	1	25			340.1	222.9	287.4	--	--	--	340.1	222.9	287.4
ADX	32	No	1	53			340.1	222.9	287.4	--	--	--	340.1	222.9	287.4
ADX	33	No	1	20			320.7	208.3	270.1	--	--	--	320.7	208.3	270.1
ADX	34	No	1	40			320.7	208.3	270.1	--	--	--	320.7	208.3	270.1
ADX	37	No	1	30			411	253	339.9	--	--	--	411	253	339.9
ADX	38	No	1	56			437	262	358.2	--	--	--	437	262	358.2
ADX	39	No	1	30			412	260	343.6	--	--	--	412	260	343.6
ADX	40	No	1	92			572.1	361.4	477.2	--	--	--	572.1	361.4	477.2
ADX	41	No	1	90			572.1	361.4	477.2	--	--	--	572.1	361.4	477.2
ADX	42	No	1	92	Ex. 4 - CBI		648.4	379.3	527.3	--	--	--	648.4	379.3	527.3
ADX	43	No	1	90			648.4	379.3	527.3	--	--	--	648.4	379.3	527.3
ADX	44	No	2	211			296.9	204.3	255.3	--	--	--	296.9	204.3	255.3
ADX	56	No	1	42			514	304	419.5	--	--	--	514	304	419.5
ADX	57	No	1	42			437	288	370	--	--	--	437	288	370
ADX	60	No	1	96			409	252	338.4	--	--	--	409	252	338.4
ADX	61	No	1	95			409	252	338.4	--	--	--	409	252	338.4
ADX	62	No	3	406			554	351	462.6	--	--	--	554	351	462.6
ADX	63	No	3	426			558	350	464.4	--	--	--	558	350	464.4
ADX	64	No	3	406			637	372	517.8	--	--	--	637	372	517.8
ADX	66	No	1	92			556	326.1	452.5	--	--	--	556	326.1	452.5
ADX	67	No	1	65			351	220	292	--	--	--	351	220	292
ADX	68	No	1	65			334	233	288.6	--	--	--	334	233	288.6
ADX	69	No	1	66			326	239	286.8	--	--	--	326	239	286.8
ADX	70	No	1	37			315.8	212.3	269.2	--	--	--	315.8	212.3	269.2
ADX	71	No	1	38			315.8	212.3	269.2	--	--	--	315.8	212.3	269.2
ADX	73	No	1	90			556	326.1	452.5	--	--	--	556	326.1	452.5
ADX	74	No	1	92			653.3	363.5	522.9	--	--	--	653.3	363.5	522.9

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Passenger Vehicles

ADX	75	No	1	90		653.3	363.5	522.9	--	--	--	653.3	363.5	522.9
ADX	80	No	1	61		421	261	349	--	--	--	421	261	349
ADX	83	No	2	160		325.5	238.5	286.4	--	--	--	325.5	238.5	286.4
ADX	84	No	2	160		408	248	336	--	--	--	408	248	336
ADX	89	No	2	212		373	240	313.2	--	--	--	373	240	313.2
ADX	165	No	3	426		683	394	553	--	--	--	683	394	553
BEX	8	No	1	15		702	379	556.6	--	--	--	702	379	556.6
BEX	12	No	1	40		650	361	520	651	357	518.7	373.8	207.3	298.9
BEX	13	No	1	55		640	359	513.6	604	359	493.8	365.3	206.4	293.8
BEX	14	No	1	35		640	359	513.6	604	359	493.8	365.3	206.4	293.8
BEX	88	No	1	45		650	361	520	651	357	518.7	373.8	207.3	298.9
BGT	85	No	1	500		885	495	709.5	--	--	--	885	495	709.5
NLX	7	No	1	475		711	393	567.9	--	--	--	711	393	567.9
VWX	1	No	1	280		329.7	218.7	279.7	--	--	--	329.7	218.7	279.7
VWX	2	No	1	280		338.8	204.5	278.3	--	--	--	338.8	204.5	278.3
VWX	5	No	1	216		321	213	272.4	--	--	--	321	213	272.4
VWX	16	No	2	96		532	313	433.4	--	--	--	532	313	433.4
VWX	17	No	1	221		301.3	197.7	254.7	--	--	--	301.3	197.7	254.7
VWX	18	No	1	221		334.6	196.8	272.5	--	--	--	334.6	196.8	272.5
VWX	19	No	1	280	**Ex. 4 - CBI**	373	238	312.2	--	--	--	373	238	312.2
VWX	22	No	1	225		321.1	208.9	270.7	--	--	--	321.1	208.9	270.7
VWX	23	No	1	221		321.1	208.9	270.7	--	--	--	321.1	208.9	270.7
VWX	24	No	1	206		321.1	208.9	270.7	--	--	--	321.1	208.9	270.7
VWX	25	No	1	230		327.1	228.6	282.7	--	--	--	327.1	228.6	282.7
VWX	26	No	1	225		337.9	200.8	276.2	--	--	--	337.9	200.8	276.2
VWX	27	No	1	221		337.9	200.8	276.2	--	--	--	337.9	200.8	276.2
VWX	28	No	1	206		337.9	200.8	276.2	--	--	--	337.9	200.8	276.2
VWX	45	No	1	230		335	212.9	280.1	--	--	--	335	212.9	280.1
VWX	46	No	2	211		343.1	216	285.9	--	--	--	343.1	216	285.9
VWX	48	No	1	280		266	162	219.2	--	--	--	266	162	219.2
VWX	49	No	1	225		271	182	231	--	--	--	271	182	231
VWX	50	No	1	221		261	172.3	221.1	--	--	--	261	172.3	221.1
VWX	51	No	1	206		261	172.3	221.1	--	--	--	261	172.3	221.1
VWX	52	No	2	65		261	172.3	221.1	--	--	--	261	172.3	221.1
VWX	53	No	1	225		263.3	169.5	221.1	--	--	--	263.3	169.5	221.1
VWX	54	No	1	221		263.3	169.5	221.1	--	--	--	263.3	169.5	221.1
VWX	55	No	1	206		263.3	169.5	221.1	--	--	--	263.3	169.5	221.1
VWX	58	No	1	298		435	265	358.5	--	--	--	435	265	358.5

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen
Manufacturer Code: VWX
Model Year: 2012
Compliance Category: Passenger Vehicles

VWX	76	No	1	280			268	179	228	--	--	--	268	179	228
VWX	78	No	1	221			316	214	270.1	--	--	--	316	214	270.1
VWX	79	No	1	221			308	192	255.8	--	--	--	308	192	255.8
VWX	86	No	2	230			348.8	214.4	288.3	--	--	--	348.8	214.4	288.3
VWX	87	No	1	230			336.7	208.5	279	--	--	--	336.7	208.5	279
VWX	90	No	1	235			337.7	235.1	291.5	--	--	--	337.7	235.1	291.5
VWX	91	No	1	235			332	219	281.2	--	--	--	332	219	281.2

Ex. 4 - CBI

Model Type Calculation Errors

Manufacturer Name:	Volkswagen	**Manufacturer Code:**	VWX
Model Year:	2012	**Compliance Category:**	Passenger Vehicles

Footprint Based Standards Calculations

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen **Manufacturer Code:** VWX

Model Year: 2012 **Compliance Category:** Passenger Vehicles

					Reformed CAFE Standard			Greenhouse Gas Standard		
Mfr Cd	**Div**	**CL**	**FP Index**	**Footprint Description**	**Trgt FE**	**Cmpl Cat**	**Prd Vol**	**Trgt GHG**	**GHG Vol**	**TLAAS**
ADX	1	10	1	A4 225/50R17	32.42	Import	Ex. 4 - CBI	270.9	5031	--
ADX	1	20	1	A4 quattro 225/50R17	32.42	Import		270.9	19892	--
ADX	1	25	1	A4 Avant quattro 225/50R17	32.42	Import		270.9	2612	--
ADX	1	30	1	S4 245/40R18	32.42	Import		270.9	4036	--
ADX	1	37	1	TT Coupe quattro 255/35R19	35.88	Import		244.5	1261	--
ADX	1	38	1	TT Roadster quattro 255/35R19	35.88	Import		244.5	576	--
ADX	1	40	1	A5 quattro 245/40R18	32.36	Import		271.4	6584	--
ADX	1	42	1	S5 255/35R19	32.48	Import		270.5	2413	--
ADX	1	51	1	A5 Cabriolet 245/40R18	32.36	Import		271.4	618	--
ADX	1	53	1	A5 Cabriolet quattro 245/40R18	32.36	Import		271.4	3007	--
ADX	1	56	1	S5 Cabriolet 255/35R19	32.48	Import		270.5	1261	--
ADX	1	61	1	TTRS 255/35R19	35.88	Import		244.5	422	--
ADX	1	65	1	A3 225/45R17	35.34	Import		248.3	2767	--
ADX	1	66	1	A3 quattro 225/45R17	35.34	Import		248.3	633	--
ADX	1	70	1	A7 quattro 255/45R18	30.04	Import		292.6	11768	--
ADX	1	75	1	A6 quattro 225/55R17	30.23	Import		290.7	16152	--
ADX	1	80	1	A6 225/55R17	30.23	Import		290.7	2222	--
ADX	1	90	1	R8 235/35R19	32.76	Import		268.1	814	--
ADX	1	92	1	R8 Spyder 235/35R19 and 295/30R19	32.76	Import		268.1	458	--
ADX	1	95	1	A8 255/40R19	29.29	Import		300.2	563	--
ADX	1	96	1	A8L 255/40R19	28.28	Import		311	3792	--
ADX	2	160	1	Tiguan 215/65R16	28.65	Import		306.4	9383	--
ADX	2	160	2	Tigaun SE low roll 235/50R18	28.8	Import		304.7	8879	--
ADX	2	211	1	GTI 225/40R18	35.08	Import		250.2	18586	--
ADX	2	212	1	Golf R 225/40R18 awd	35.08	Import		250.2	2822	--
ADX	2	230	1	Beetle 2.0T 235/45R18	34.95	Import		251.1	2212	--
ADX	2	293	1	CC 235/45R17	33.22	Import		264.3	29135	--
ADX	3	406	1	Gallardo 235/35R19 295/30R19	33.7	Import		260.5	154	--
ADX	3	426	1	Gallardo Spyder 235/35R19 295/30R19	33.7	Import		260.5	131	--
BEX	1	15	1	Mulsanne 265/65R20	27.95	Import		315	233	--
BEX	1	35	1	GT 275/40R19	31.87	Import		275.6	994	--
BEX	1	40	1	Flying Spur 275/40R19	29.11	Import		302.1	395	--
BEX	1	45	1	GTC 275/40R19	31.87	Import		275.6	589	--
BEX	1	55	1	Continental Supersports Convertible 275/35R20	31.55	Import		278.5	82	--
BGT	1	500	1	Veyron	31.29	Import		280.8	5	--
NLX	1	475	1	Aventador 2555/35R19 335/30R20	30.83	Import		285.1	252	--

CAFE/GHG Draft Calculation Information Report

Manufacturer Name: Volkswagen **Manufacturer Code:** VWX

Model Year: 2012 **Compliance Category:** Passenger Vehicles

VWX	1	206	1	Golf 195/65R15	35.01	Import	Ex. 4 - CBI	250.6	11120	--
VWX	1	206	2	Golf TDI 225/45R17	35.27	Import		248.7	11265	--
VWX	1	216	1	Eos 235/45R17	34.69	Import		253	11140	--
VWX	1	221	1	Jetta 205/55 R16	34.12	Import		257.2	117966	--
VWX	1	221	2	Jetta (MPI) 195/65/R15	34.06	Import		257.7	27717	--
VWX	1	221	3	Jetta (GLI) 225/45 R17	34.31	Import		255.8	8767	--
VWX	1	225	1	Jetta SportWagen 205/55R16	35.08	Import		250.2	23703	--
VWX	1	230	1	Beetle 2.0T 235/45R18	34.95	Import		251.1	7397	--
VWX	1	230	2	Beetle 2.5L 215/55R17	34.82	Import		252	20863	--
VWX	1	235	1	Beetle Convertible 2.0T 235/45R18	34.95	Import		251.1	150	--
VWX	1	280	1	Passat (TDI) 215/55 R17	32.14	Domestic		273.3	18676	--
VWX	1	280	2	Passat (VR6) 235/45 R18	32.31	Domestic		271.9	4457	--
VWX	1	280	3	Passat (2.5) 215/60 R16	32.14	Domestic		273.3	72450	--
VWX	1	298	1	CC 4Motion 235/40R18	33.22	Import		264.3	215	--
VWX	2	65	1	A3 TDI 225/45R17	35.34	Import		248.3	3887	--
VWX	2	96	1	A8L 255/40R19 12 cyl	28.28	Import		311	183	--

To: Good, David[good.david@epa.gov]; Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Zaremski, Sara[zaremski.sara@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]; French, Roberts[french.roberts@epa.gov]
From: Ken.Katz@dot.gov
Sent: Fri 5/30/2014 6:58:45 PM
Subject: RE: NHTSA decision to combine the 2012 VW/Porsche CAFE - 2012 VW-only CAFE/GHG reports attached

Dave,

Thanks for the information. The CAFE database team will await for the final certified MY 2012 CAFE report for VW to be available through the webservice prior to NHTSA incorporating that data officially in the system. We understand that the 2 month timeframe is an estimate.

Providing the attached pdfs will greatly assist my friends in enforcement as they proceed with their efforts.

Thanks,

Ken

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, May 30, 2014 2:42 PM
To: Thompson, Harry (NHTSA)
Cc: Katz, Ken (NHTSA); Wehrly, Linc; Zaremski, Sara; Peavyhouse, Robert; French, Roberts
Subject: NHTSA decision to combine the 2012 VW/Porsche CAFE - 2012 VW-only CAFE/GHG reports attached

Harry,

We will await the NHTSA letter to VW before we request that VW revise their 2012 CAFE model year report and data entry into EPA's database. It will likely take approximately 2 months for VW to combine the VW & Porsche 2012 CAFE calculations, to recalculate the CAFE values and send EPA a revised CAFE model year report, etc.

Attached are 2012 VW-only CAFE Calculations for domestic pass cars, import pass cars & light trucks (2 attachments)---which don't include any 2012 Porsche models. [FYI---the only 2012 carline in the domestic pass car class is the Passat (which is made in Tennessee).]

I double checked the attached CAFE values & production volume in both attachments and they look correct to me (and agree with the VW model year report). Please disregard the Greenhouse Gas values.

We sent you the 2012 Porsche import pass car and light truck CAFE values in December, 2013. Let me know if you need a copy.

Two corrections for the VW passenger car report:

For some models, the enclosed "CAFE/GHG Calculation Information Report" (page 11 of the passenger car report) does not show the correct target fuel economy values (Trgt FE) or the correct target greenhouse gas values (Trgt GHG). The EPA CAFE and GHG calculations were performed using the correct target values, as shown below for the following models:

Model	Target FE (mpg)	Target GHG (grams/mile)
Tiguan 215/65R16	34.00	258.2
Tiguan SE low roll 235/50R18	34.25	256.3

Keep us posted on the status of the NHTSA letter to VW.

Thanks

From: Good, David
Sent: Wednesday, May 28, 2014 3:52 PM
To: 'Harry.Thompson@dot.gov'
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov; Wehrly, Linc; French, Roberts; Zaremski, Sara; Peavyhouse, Robert
Subject: RE: CAFE and Fuel Consumption; NHTSA decided to combine the 2012 VW/Porsche CAFE

Harry,

1. **Combining VW/Porsche 2012 CAFE calculations:** I'll call you about combining VW & Porsche CAFE fleets for MY 2012. I have a few questions, etc. As EPA staff indicated to NHTSA last year, it will take VW (and EPA) a couple months to combine the VW & Porsche 2012 fleets for CAFE calculations (and not combine them for GHG calculations); to recalculate their CAFE value and send EPA a revised CAFE model year report, etc.

2. **HD 2b/3 2015 PreMY Reports & Chrysler/Cummins final 2013 MY report:** See my previous email---I'll try to send you an update and all the HD 2b/3 CAFE/GHG reports in a day or so. [First, I need to see if Daimler, Chrysler & Cummins sent their 2015 pre-MY reports to EPA yet. If so, I need to double check the mfr values and update the EPA summary.]

3. **EPA Confirmatory Testing HD 2b/3 vehicles:** EPA will review the manufacturer's EPA test request for HD 2b/3 4WD vehicles and decide which vehicles to test here at our Ann Arbor MI lab. We can test HD vehicles up to and beyond 14,000 GVW (14,000 lb test weight) here at the EPA lab---so yes, we can test them. We don't test them on a 4WD dyno unless the mfr also tested the vehicle on a 4WD dyno. Normally, we disconnect the driveshaft and test them in the 2WD mode---on a 2WD dynamometer with the a, b, c dyno coefficients set to simulate the vehicle road load horsepower (RLHP) of a vehicle driven on the road (e.g. in the 2WD mode for selectable 2WD/4WD vehicles).

Dave

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Wednesday, May 28, 2014 10:11 AM
To: Good, David
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov
Subject: CAFE and Fuel Consumption

1. NHTSA has decided that VW and Porsche have combined fleets for MY 2012. Please generate IP and LT CAFÉ mpgs accordingly as soon as possible.

2. Following up on an email sent by Maurice Hicks: does EPA have any 2b&3 data since the last sharing in January 2014? Also, do summary charts exist, i.e., for MYs 2013 & 2014?

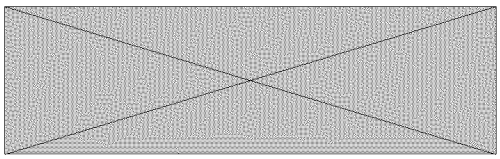
3. For 4WD 2b & 3 vehicles, will EPA do dyno testing on them? Is there a max GVWR or GAWR limit on the 4WD dyno?

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 5/30/2014 7:51:12 PM
Subject: P.M. NEWSCAST: Akerson 'didn't know' about defect | VW's product-pace plan | 10 million Toyotas in Ky. | Musk's space taxi

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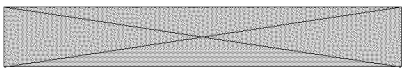
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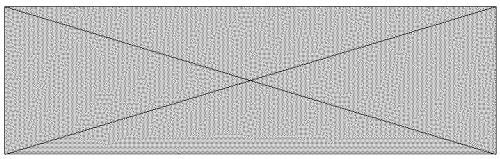
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From: Automotive News
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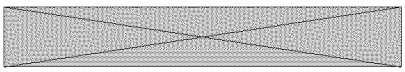
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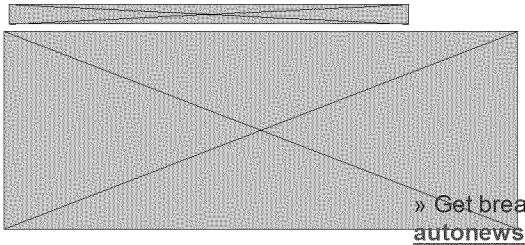
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 5/30/2014 8:26:28 PM
Subject: DAILY: Akerson, Solso deny knowing of GM ignition switch defect | Hyundai drops turbo, moving Genesis coupe upscale for 2015 | VW to bring new models to U.S. more quickly | Zetsche explains how F1 helps Mercedes

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1:45 pm U.S. ET | May 30

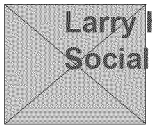
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UPDATED: 5/30/14 10:14 am ET

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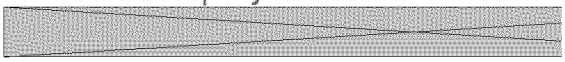
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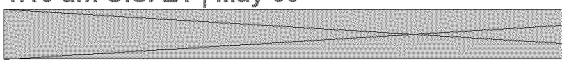
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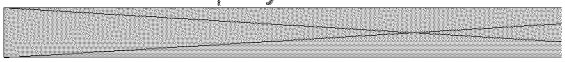
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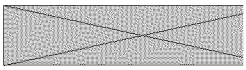


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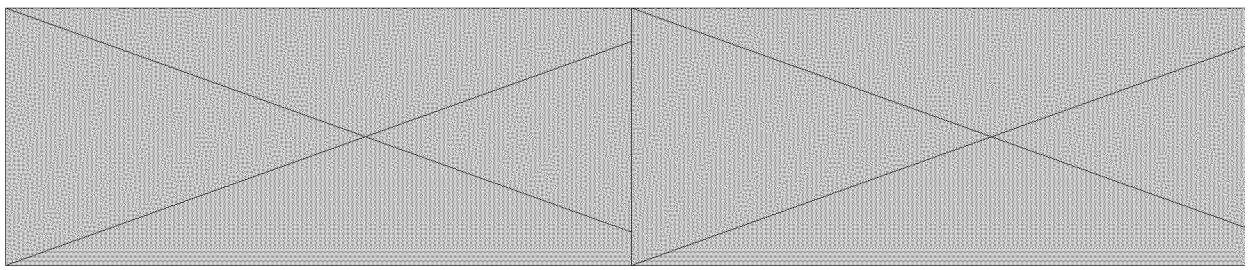
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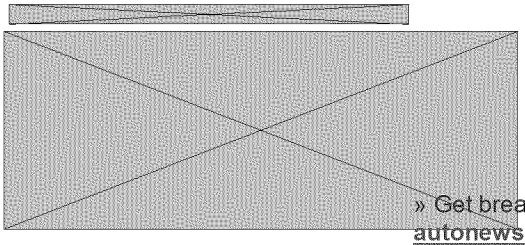
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 5/30/2014 8:26:52 PM
Subject: DAILY: Akerson, Solso deny knowing of GM ignition switch defect | Hyundai drops turbo, moving Genesis coupe upscale for 2015 | VW to bring new models to U.S. more quickly | Zetsche explains how F1 helps Mercedes

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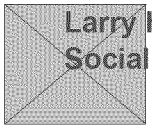
General Motors Chairman Tim Solso and former CEO Dan Akerson said neither they nor current CEO Mary Barra knew about GM's defective ignition switches that have been linked to 13 deaths. ... » READ

Hyundai drops turbo, moving Genesis coupe upscale for 2015

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VW to bring new models to U.S. more quickly

6:33 am U.S. ET | May 30

VW Group is preparing to bring new and updated models from its namesake brand to the United States on a shorter time frame. The VW marque will introduce new products every five years, down from seven. ...
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UPDATED: 5/30/14 7:55 am ET - adds CEO comments, details

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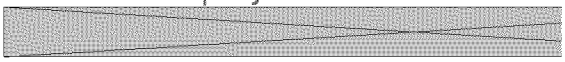
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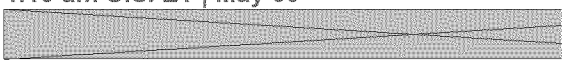
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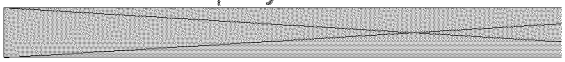
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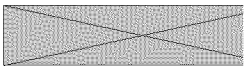


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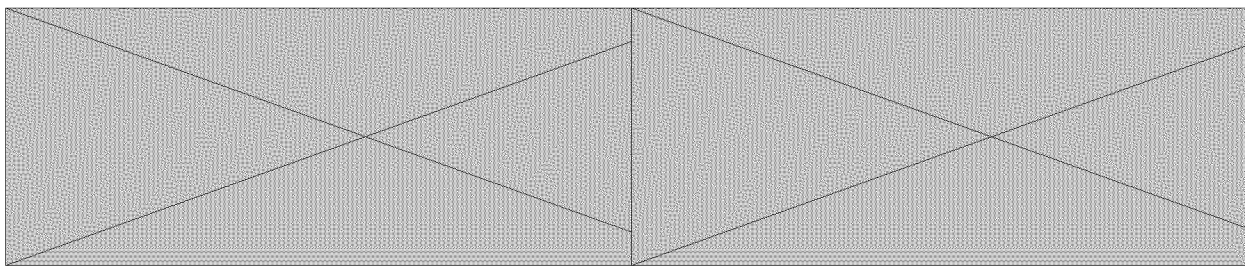
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To: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
Cc: ken.katz@nhtsa.dot.gov[ken.katz@nhtsa.dot.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Zaremski, Sara[zaremski.sara@epa.gov]
From: Good, David
Sent: Fri 5/30/2014 10:01:39 PM
Subject: 2012 CAFE Status for all mfrs - Spreadsheet attached
2012 CAFE Status.n13.xlsx

Harry,

Attached is my 2012 CAFE summary table—FYI.

Dave

From: Good, David
Sent: Friday, May 30, 2014 2:42 PM
To: 'Harry.Thompson@dot.gov'
Cc: 'ken.katz@nhtsa.dot.gov'; Wehrly, Linc; Zaremski, Sara; Peavyhouse, Robert; French, Roberts
Subject: NHTSA decision to combine the 2012 VW/Porsche CAFE - 2012 VW-only CAFE/GHG reports attached

Harry,

We will await the NHTSA letter to VW before we request that VW revise their 2012 CAFE model year report and data entry into EPA's database. It will likely take approximately 2 months for VW to combine the VW & Porsche 2012 CAFE calculations, to recalculate the CAFE values and send EPA a revised CAFE model year report, etc.

Attached are 2012 VW-only CAFE Calculations for domestic pass cars, import pass cars & light trucks (2 attachments)---which don't include any 2012 Porsche models. [FYI---the only 2012 carline in the domestic pass car class is the Passat (which is made in Tennessee).]

I double checked the attached CAFE values & production volume in both attachments and they

look correct to me (and agree with the VW model year report). Please disregard the Greenhouse Gas values.

We sent you the 2012 Porsche import pass car and light truck CAFE values in December, 2013. Let me know if you need a copy.

Two corrections for the VW passenger car report:

For some models, the enclosed "CAFE/GHG Calculation Information Report" (page 11 of the passenger car report) does not show the correct target fuel economy values (Trgt FE) or the correct target greenhouse gas values (Trgt GHG). The EPA CAFE and GHG calculations were performed using the correct target values, as shown below for the following models:

Model	Target FE (mpg)	Target GHG (grams/mile)
Tiguan 215/65R16	34.00	258.2
Tiguan SE low roll 235/50R18	34.25	256.3

Keep us posted on the status of the NHTSA letter to VW.

Thanks

From: Good, David
Sent: Wednesday, May 28, 2014 3:52 PM
To: 'Harry.Thompson@dot.gov'
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov; Wehrly, Linc; French, Roberts; Zaremski, Sara; Peavyhouse, Robert
Subject: RE: CAFE and Fuel Consumption; NHTSA decided to combine the 2012 VW/Porsche CAFE

Harry,

1. **Combining VW/Porsche 2012 CAFE calculations:** I'll call you about combining VW & Porsche CAFE fleets for MY 2012. I have a few questions, etc. As EPA staff indicated to NHTSA last year, it will take VW (and EPA) a couple months to combine the VW & Porsche 2012 fleets for CAFE calculations (and not combine them for GHG calculations); to recalculate their CAFE value and send EPA a revised CAFE model year report, etc.

2. **HD 2b/3 2015 PreMY Reports & Chrysler/Cummins final 2013 MY report:** See my previous email---I'll try to send you an update and all the HD 2b/3 CAFE/GHG reports in a day or so. [First, I need to see if Daimler, Chrysler & Cummins sent their 2015 pre-MY reports to EPA yet. If so, I need to double check the mfr values and update the EPA summary.]

3. **EPA Confirmatory Testing HD 2b/3 vehicles:** EPA will review the manufacturer's EPA test request for HD 2b/3 4WD vehicles and decide which vehicles to test here at our Ann Arbor MI lab. We can test HD vehicles up to and beyond 14,000 GVW (14,000 lb test weight) here at the EPA lab---so yes, we can test them. We don't test them on a 4WD dyno unless the mfr also tested the vehicle on a 4WD dyno. Normally, we disconnect the driveshaft and test them in the 2WD mode---on a 2WD dynamometer with the a, b, c dyno coefficients set to simulate the vehicle road load horsepower (RLHP) of a vehicle driven on the road (e.g. in the 2WD mode for selectable 2WD/4WD vehicles).

Dave

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Wednesday, May 28, 2014 10:11 AM
To: Good, David
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov
Subject: CAFE and Fuel Consumption

1. NHTSA has decided that VW and Porsche have combined fleets for MY 2012. Please generate IP and LT CAFÉ mpgs accordingly as soon as possible.

2. Following up on an email sent by Maurice Hicks: does EPA have any 2b&3 data since the last sharing in January 2014? Also, do summary charts exist, i.e., for MYs 2013 & 2014?

3. For 4WD 2b & 3 vehicles, will EPA do dyno testing on them? Is there a max GVWR or GAWR limit on the 4WD dyno?

2012 CAFE Status - All Manufacturers

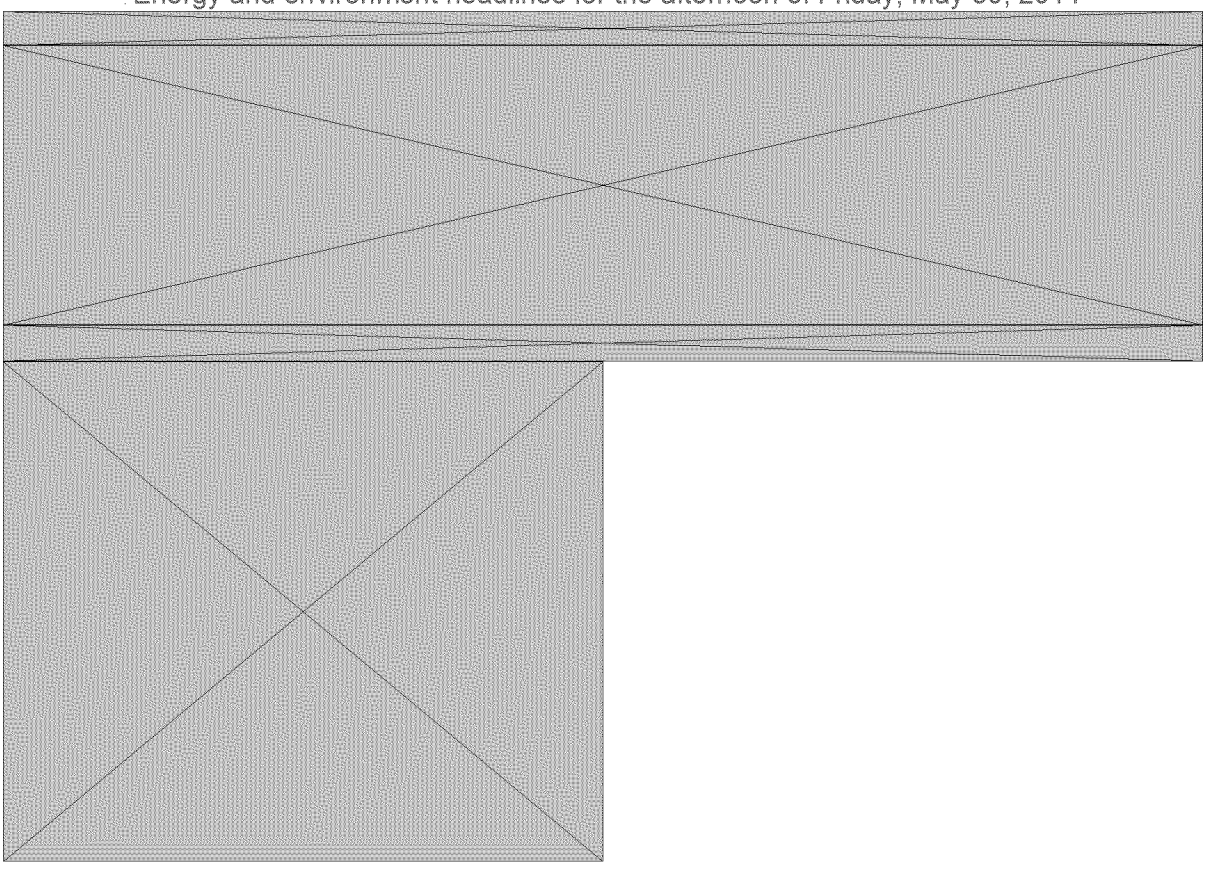
D. Good 5/30/2014

Mfr Name	Mfr Code	Association (on 7/1/13)	Cate-gory Code	Category	Production Volume	Official CAFE MPG	CAFE (Footprint) Standard	Domestic Pass Cars MIN Std	Baseline MPG (w/o AMFA credit)	EPA Letter Date	CAFE includes the following Vehicles:	Potential Penalties	Percent of Production represented by config-uration	Percent of Production represented by subcon-figuratilon
Aston Martin	70	GA	2	Import car	1,056	19.2	32.3		NA	11/20/2013		$760,848.00		
BMW	120	Alliance	2	Import car	191,154	32.4	32.6		NA	12/6/2013	Mini, Rolls Royce	$2,102,694.00		
	120		7	Light Truck	65,856	25.0	26.1		NA	12/6/2013		$3,984,288.00		
BYD			2	Import car	11						BYD is a Chinese EV mfr;			
Coda			2	Import car	115	254.1	35.6		NA	4/14/2014	Although a SMV (in Chaper 11 Bankrupcy) BYD did submit CAFE			
Chrysler-see Fiat	20	Alliance		Domestic car & Light Truck								included in Fiat		
Ferrari-see Fiat	220	GA	2	Import car								included in Fiat		
Fisker			2	Import car	1,415						Out of business; filed for chapter 11 bankruptcy on Oct 22, 2013 before entering CAFE/GHG data into EPA's Verify database..			
Fiat (Chrysler LLC,	826		1	Domestic car	536,415	31.1	31.8	30.7	29.9	3/3/2014	Chrysler vehs only; Penalty likely will be offset by previous credits	$20,651,977.50		
Ferrari, Maserati)			2	Import car	3,982	19.0	30.9		NA	3/3/2014	1510 Ferraris & 2472 Maseratis only; No Alfa Romeo models sold	$2,606,219.00		
			7	Light Truck	994,996	24.3	25.5		23.1	12/13/2013	Chrysler trucks only; Penalty likely will be offset by previous credits	$65,669,736.00		
Ford	30	Alliance	1	Domestic car	1,045,590	35.7	33.2	30.7	34.5	12/13/2013	Includes Roush Mustangs (NHTSA approved in previous years); Excludes CrownVic (?) police (emergency) vehs.			
	30		2	Import car	6,560	31.3	31.7		NA	12/13/2013	Transit Connect wagons, only.			
	30		7	Light Truck	701,227	24.3	24.2		23.1	12/13/2013				
General Motors	40	Alliance	1	Domestic car	1,449,244	32.8	32.3	30.7	31.6	11/27/2013	Saab 9-4X 2WD & AWD models			
	40		2	Import car	NA	NA	NA		NA	NA				
	40		7	Light Truck	915,130	23.7	23.8		22.5	11/27/2013	Penalty will be offset by previous model year credits	$5,033,215.00		
Honda	260	GA	1	Domestic car	882,051	38.2	33.3	30.7	NA	3/3/2014				
	260		2	Import car	165,114	36.5	33.6		NA	3/3/2014				
	260		7	Light Truck	493,414	27.7	26.4		NA	12/18/2013				
Hyundai	265	GA	2	Import car										
	265		7	Light Truck							No Hyundai Entourages--they are included in Kia CAFE			
Jaguar/Land Rover	305	Alliance	2	Import car	12,769	23.7	30.2		NA	12/6/2013		$4,564,917.50		
	460		7	Light Truck	41,766	20.2	27.1		NA	12/6/2013		$15,850,197.00		
Kia Motors	338	GA	2	Import car										
	338		7	Light Truck							Hyundai Entourage (made by Kia)--NHTSA OK'd for 2009			
Lotus	350		2	Import car	146	27.0	34.3		NA	11/21/2013		$58,619.00		
Maserati-see Fiat	360	GA	2	Import car								included in Fiat		
Mazda	560	Alliance	1	Domestic car	NA	NA	NA		NA	NA				
			2	Import car	213,308	37.9	33.9		NA	12/11/2013				
	560		7	Light Truck	65,696	27.8	27.2		NA	NA				
McLaren		GA	2	Import car	697	23.2	32.5		NA	12/11/2013		$356,515.50		
Mercedes Benz	200	Alliance	2	Import car	173,832	29.3	32.3		28.4	12/18/2013		$28,682,280.00		
(Daimler)	200		7	Light Truck	81,573	23.9	26.0		23.1	12/18/2013		$9,421,681.50		
Mitsubishi	490	Alliance	2	Import car	51,927	34.1	33.6		NA	12/23/2013				
	490		7	Light Truck	12,540	31.5	28.6		NA	12/18/2013				
Nissan	380	GA	1	Domestic car	524,191	35.2	32.9	30.7	NA	12/19/2013				
	380		2	Import car	372,087	35.2	34.1		NA	12/19/2013				
	380		7	Light Truck	331,886	24.4	26.1		23.5	12/19/2013	No Suzuki Equators--they are included in Suzuki's CAFE; Penalty will be offset by previous model year credits	$31,031,341.00		
Porsche	420	Alliance	2	Import car	16,946	27.5	33.0		NA	12/10/2013	NHTSA indicates Porche should be combined with VW for 2012MY	$5,126,165.00		
	420		7	Light Truck	12,927	24.6	26.0		NA	12/10/2013	NHTSA indicates Porche should be combined with VW for 2012MY	$995,379.00		
Saab	470	NA	2	Import car	NA	NA	NA		NA	NA	Saab stopped production on 4/6/2011; GM says no 2012 Saab 9-3, 9-4, 9-5s were produced for U.S except 9-4X which is in GM's 2012 CAFE;			
Spyker	1842		2	Import car	NA	NA	NA		NA	NA	Spyker didn't sell 2011-12 model year vehicles in U.S; ref 2/7/2013			
Subaru (Fuji)	660	GA	1	Domestic car	NA	NA	NA		NA	NA				
	660		2	Import car	3,106,152	35.5	33.8		NA	12/11/2013				
	660		7	Light Truck	163,960	30.5	28.4		NA	12/11/2013				
Suzuki	540	GA	2	Import car	25,266	33.6	34.9		NA	12/12/2013	No Domestic Passenger Cars produced in the 2011 model year.	$1,806,519.00		
	540		7	Light Truck	5,997	24.6	27		NA	12/12/2013	Equator (made by Nissan); OK'd by NHTSA in 2009 (5/2/11 email);	$791,604.00		
Tesla	TSL		1	Domestic car	2,952	273.4	30.7	30.7	NA	4/14/2014				
Toyota	570	Alliance	1	Domestic car				30.7			Toyota & Lexus RX350 models			
	570	& GA	2	Import car							Toyota, Scion, Lexus models			
	570		7	Light Truck	722,227	25.5	25.7		24.9	12/20/2013	Toyota, Lexus models	$7,944,497.00		
Volkswagen Group	590	Alliance	1	Domestic car	95,583	33.7	32.1	30.7	NA		Passat models only			
	590		2	Import car	405,107	33.3	33.7		33.2		VW, Audi, Bentley, Bugatti, Lamborghini,	$8,912,354.00		
	590		7	Light Truck	64,882	27.4	26.9		NA		VW, Audi;			
Volvo	600	Alliance	2	Import car	52,375	29.7	32.3		NA	12/18/2013		$7,489,625.00		
	600		7	Light Truck	19,432	25.5	27.0		NA	12/18/2013		$1,603,140.00		
VPG			7	Light Truck							Out of business; VPG not responding to 2013 emails, etc.			
				Total:	14,029,554						Total potential penalties:	$225,443,812.00	90% Minimum	No Reqmt
Notes:													(must round to 90%)	
											Estimated total penalties not covered by previous credits:	#VALUE!		

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Fri 5/30/2014 10:05:33 PM
Subject: EIA launches reports on crude export ban

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Energy and environment headlines for the afternoon of Friday, May 30, 2014



EIA launches reports on crude export ban

By Edward Felker

The Energy Department's data and analysis wing has launched the first public government examination of the U.S. oil market in response to calls from industry and lawmakers for a review of the ban on crude oil exports.

The Energy Information Administration on Thursday, without fanfare, published the first of what it said would be a series of analyses of U.S. production and the impacts of lifting or easing the ban. In the report, on the short term oil outlook by types of crude, EIA said a majority of production through 2015, about 60 percent, would consist of lighter grades.

Industry contends booming light petroleum production could soon exceed domestic refining capacity and should be considered for export.

The report comes as the Obama administration has said it is reviewing the ban, put into law in 1975.

The oil industry, with allies in Congress, has begun lobbying for a repeal of the ban. It argues that U.S. refining capacity is mostly optimized for heavier grades and that exports would help offset the nation's demand for imported oil, while keeping the oil boom underway.

EIA said the reports are being prepared in response to "multiple requests," but was not specific about the sources.

Among those requests was a joint April request for EIA study by Senate Energy and Natural Resources Chair Mary Landrieu, D-La., and the panel's ranking Republican Sen. Lisa Murkowski.

They asked EIA to report on production by grades, the relative competitiveness of U.S. refiners, the ban's impact on refiners, consumers and producers, and the economic impact of lifting the ban.

Aides to Landrieu did not respond on Friday to a request for comment. Murkowski said she welcomed the EIA report.

"This in-depth and rigorous analysis is exactly what I had in mind when I asked the EIA to examine the rapidly changing picture of U.S. oil production," she said.

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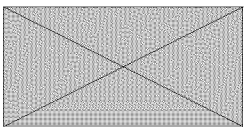
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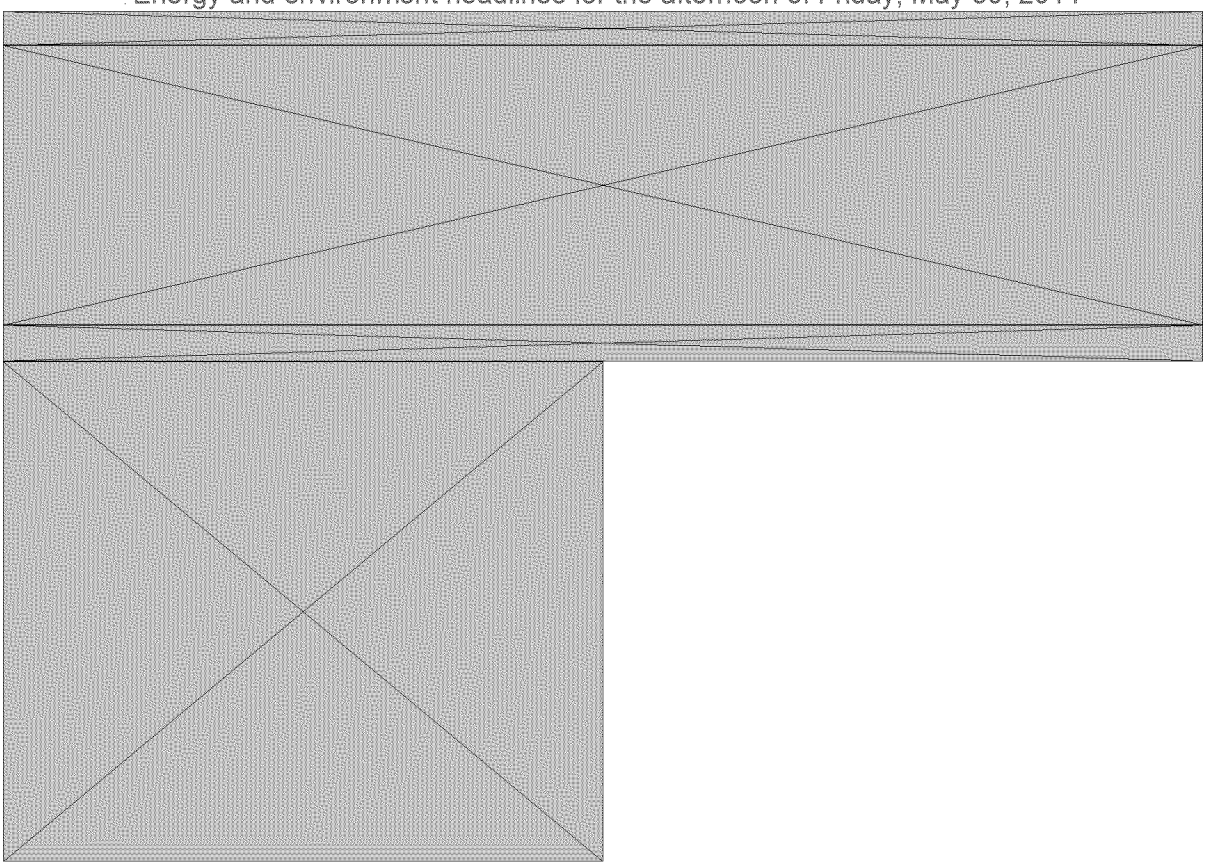
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Among those requests was a joint April request for EIA study by Senate Energy and Natural Resources Chair Mary Landrieu, D-La., and the panel's ranking Republican Sen. Lisa Murkowski.

They asked EIA to report on production by grades, the relative competitiveness of U.S. refiners, the ban's impact on refiners, consumers and producers, and the economic impact of lifting the ban.

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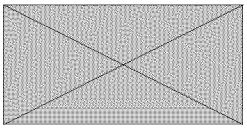
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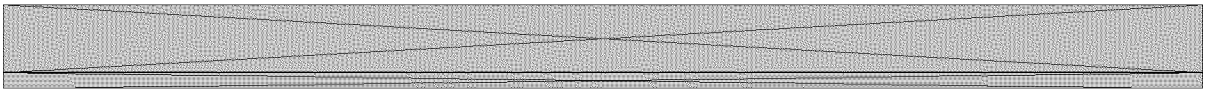
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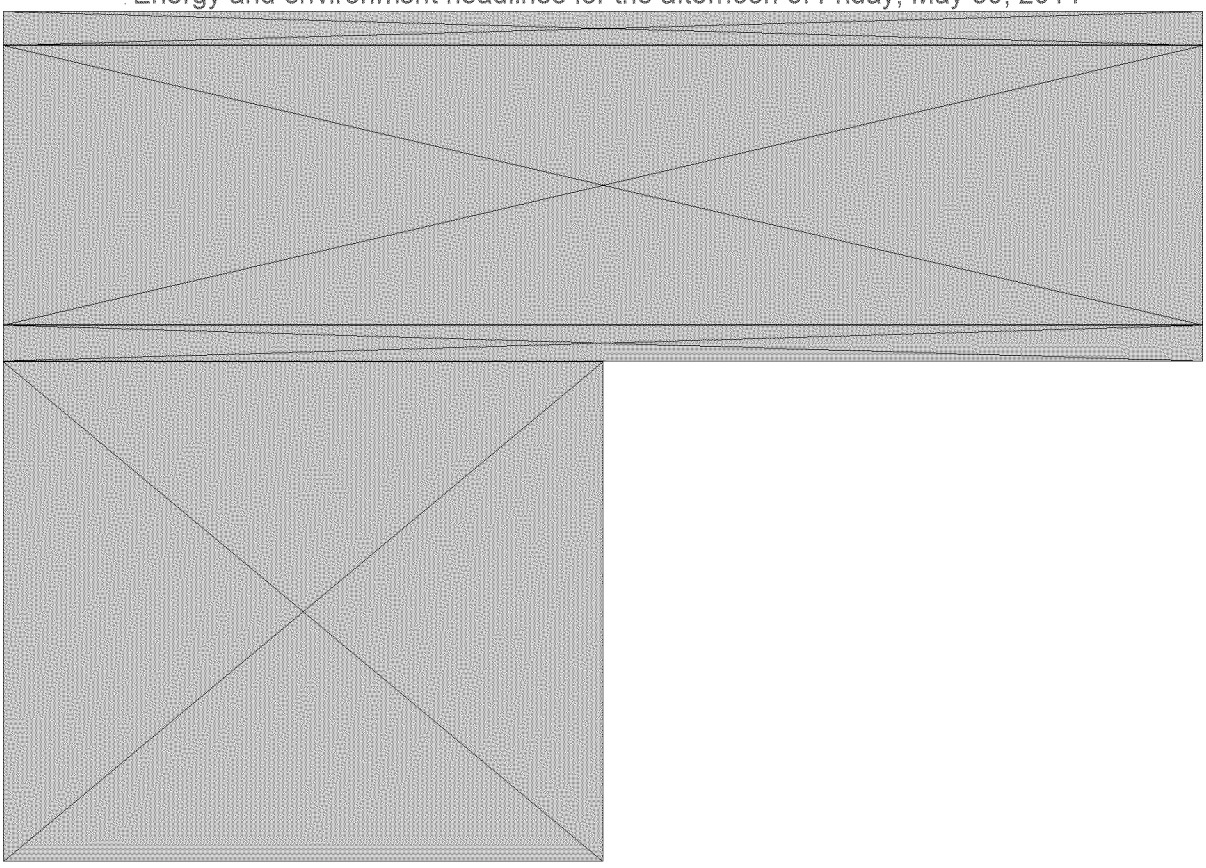
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The oil industry, with allies in Congress, has begun lobbying for a repeal of the ban. It argues that U.S. refining capacity is mostly optimized for heavier grades and that exports would help offset the nation's demand for imported oil, while keeping the oil boom underway.

EIA said the reports are being prepared in response to "multiple requests," but was not specific about the sources.

Among those requests was a joint April request for EIA study by Senate Energy and Natural Resources Chair Mary Landrieu, D-La., and the panel's ranking Republican Sen. Lisa Murkowski.

They asked EIA to report on production by grades, the relative competitiveness of U.S. refiners, the ban's impact on refiners, consumers and producers, and the economic impact of lifting the ban.

Aides to Landrieu did not respond on Friday to a request for comment. Murkowski said she welcomed the EIA report.

"This in-depth and rigorous analysis is exactly what I had in mind when I asked the EIA to examine the rapidly changing picture of U.S. oil production," she said.

"The growing mismatch between the type of oil that is increasingly being produced in the middle of the country and our ability to refine it is causing distortions in the market. Lifting the export ban will spur domestic production and inject much-needed investment in the U.S. economy," she added.

The American Petroleum Institute has been calling either for the administration to use executive authority to allow exports, or for Congress to repeal the ban outright.

It issued a state-by-state report Thursday on potential benefits, adding to an earlier study that projected an additional 300,000 U.S. jobs by 2020 from exports, and annual consumer savings of $5.8 billion between 2015 and 2035.

A spokesman at API said the group had not yet examined the EIA report.

Separately, consulting firm IHS issued its own report Thursday, funded by major oil companies, that found exports would support nearly 1 million U.S. jobs by driving up domestic production by 3 million barrels a day and investments of $750 billion.

IHS said exports would exert downward pressure on gasoline prices by 8 cents per gallon by injecting a new source into world markets, saving consumers up to $265 billion from 2016-2030.

Senior White House adviser John Podesta told reporters Thursday that the administration's examination of the ban is underway, but gave no clues about its next step.

Energy Secretary Ernest Moniz and Podesta have previously said the ban is getting a closer look. Podesta said that includes the sources, types and volumes of crude being produced, as well as U.S. capacity to refine light crudes.

"We're continuing to review that and when we have something to say about it, we'll say it."

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Upcoming Events

Oil falls below $103, ends week down 1.6 percent

By The Associated Press

The price of oil fell below $103 per barrel Friday on ample supplies of crude and fuels.

Benchmark U.S. crude for July delivery fell 87 cents to close at $102.71 a barrel in New York. The contract closed down 1.6 percent for the week, though it finished the month up nearly 3 percent.

Brent crude, a benchmark for international oil used by many U.S. refineries, fell 56 cents to close at $109.41 a barrel in London.

The price of crude was pulled down in part by the falling prices of wholesale gasoline and heating oil, suggesting that the U.S. has ample supplies of refined fuels. That could crimp demand for crude oil in coming weeks.

Crude supplies in the U.S. are also plentiful, but crude prices were pushed higher during the month because inventories at the U.S. trading hub where benchmark crude is priced have fallen sharply.

Next week traders are expected to focus on a string of macroeconomic reports, including a manufacturing report and employment data that could change expectations for gasoline, diesel and crude demand.

More

Obama launches public push on power plant rules

By Josh Lederman

WASHINGTON (AP) — President Barack Obama launched a show of support Friday for new emissions rules for power plants, putting the weight of the White House behind the government's controversial strategy for combating climate change.

Three days before his administration is set to unveil the first carbon dioxide limits on existing plants, Obama paid a surprise visit to a children's hospital and met with young asthma patients, hoping to call attention to the health effects of air pollution. He also talked up the need to curb carbon pollution during a hurricane preparedness briefing at Federal Emergency Management Agency headquarters.

"The changes we're seeing in our climate means that, unfortunately, storms like Sandy could end up being more common and more devastating," Obama said, invoking the deadly 2012 superstorm that's become a rallying cry for climate activists.

The pair of appearances kicked off a public campaign by the president to rally Americans behind groundbreaking power plant rules that have already drawn scorn from the energy industry, business groups and even some Democrats from oil-dependent states.

Obama's visit with young asthmatics at the Children's National Medical Center was closed to reporters, but the White House said while at the hospital, Obama was also taping his weekly radio and Internet address, which spotlights the carbon rules and will be released Saturday.

More

White House proposes updated Great Lakes plan

By John Flesher

TRAVERSE CITY, Mich. (AP) — The Obama administration is proposing an updated blueprint for Great Lakes environmental restoration that puts greater emphasis on climate change and using science to select projects and measure their effectiveness.

Congress has appropriated roughly $1.6 billion for the Great Lakes Restoration Initiative, with the first installment in 2010. The administration is proposing to extend the program another five years.

"Protecting communities around the Great Lakes and restoring this important ecosystem is a national and binational imperative," said Gina McCarthy, chief of the U.S. Environmental Protection Agency, which coordinates the program with support from 10 other federal departments.

They have awarded more than 2,100 grants to universities, nonprofits, tribes and government agencies across the eight-state region for projects including removal of sediments laced with toxic chemicals, rebuilding wetlands and uprooting invasive plants. The program also has supported the fight to prevent aggressive Asian carp from reaching the lakes.

A federal task force developed the new installment in consultation with regional stakeholder groups, said Cameron Davis, a senior adviser to McCarthy. A final version is to be adopted by Oct. 1, allowing time for public comment.

More

Los Alamos unable to meet nuke waste deadline

By Jeri Clausing

ALBUQUERQUE, N.M. (AP) — Los Alamos National Laboratory won't be able to meet a deadline for getting toxic waste from decades of building nuclear bombs off its northern New Mexico campus before wildfire season peaks, the U.S. Department of Energy said Friday.

In a statement, the department said it has notified the New Mexico Environment Department that it can't move the last of thousands of barrels of waste containing things like contaminated gloves and tools until officials are sure it is safe.

A canister shipped from Los Alamos to the Waste Isolation Pilot Project has been linked to a radiation release Feb. 14 at the underground repository in southeastern New Mexico. Officials are investigating whether hundreds of other barrels from Los Alamos that are currently stored at the West Isolation Pilot Plant, Los Alamos and in West Texas are at risk of releasing radiation.

The waste was packed with cat litter to absorb moisture. Officials are trying to determine whether a switch from inorganic to organic litter is to blame for a chemical reaction with nitrate salts that caused the accident that contaminated 22 workers and indefinitely shuttered the plant.

Deputy Undersecretary David Klaus said the energy department has "made great strides in cleanup at the Los Alamos National Laboratory," but it is halting shipments "until we can reassure the public that it is safe to do so."

"This was a tough decision to make and the Department remains committed to solving this issue and resuming shipments," Klaus said.

More

Feds: Arch Coal workers took $2M in kickbacks

By Jonathan Mattise

CHARLESTON, W.Va. (AP) — Arch Coal employees at a West Virginia mine are charged with pocketing almost $2 million from vendors in a pay-to-play kickback scheme, federal prosecutors said Friday.

U.S. Attorney Booth Goodwin said the widespread setup required vendors to pay kickbacks to Arch Coal employees to do business with the coal company.

Four employees at Arch Coal's Mountain Laurel mining complex in Logan County are accused of taking kickbacks from 2007 to 2012. Prosecutors said the mine's former general manager, David E. Runyon, was at the center of the setup.

Prosecutors said some companies spent more than $400,000 to maintain lucrative contracts with Arch Coal, one of the biggest coal producers and marketers worldwide.

Ten people in all have been charged, with vendors, contractors and four Arch employees among them. The employees are no longer with the company.

Companies knew Arch Coal would sever their contracts if the side payments stopped. Likewise, Runyon knew losing the contracts would hurt the companies, according to court documents.

More

A message from the American Petroleum Institute

America is now the world's #1 natural gas producer and is expected to become #1 in oil by 2015. Smart energy policies can create jobs, grow our economy and establish America as a global energy leader.

Learn more at ChooseEnergy.org

US rig count up 9 to 1,866

By The Associated Press

HOUSTON (AP) — Oilfield services company Baker Hughes Inc. says the number of rigs exploring for oil and natural gas in the U.S. increased by nine this week to 1,866.

The Houston firm said in its weekly report Friday that 1,536 rigs were exploring for oil and 326 for gas. Four were listed as miscellaneous. A year ago there were 1,771 active rigs.

Of the major oil- and gas-producing states, Oklahoma gained eight rigs, Texas gained five Wyoming gained two and Alaska and California each increased by one apiece.

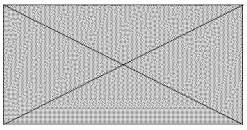
North Dakota lost five rigs while Kansas, New Mexico and Ohio each decreased by one.

Arkansas, Colorado, Louisiana, Pennsylvania, Utah and West Virginia were all unchanged.

More

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Obama seeks to cast energy policies as job creator



Check out the new Energy Brief website, which includes our weekly energy fact sheet.

Click here to read the brief

Cheniere to send liquefied natural gas to Spain

A Cheniere Energy subsidiary has inked a $5.6 billion, 20-year deal with Spanish firm Iberdrola SA to supply up to an initial 400,000 metric tons of liquefied natural gas a year from an export facility it's planning in Corpus Christi, the companies announced Friday, FuelFix reports.

More

Democrats hoping climate change fight will help their election efforts

Democrats pushing the Obama administration plans to fight climate change are hoping that as more Americans are directly affected by the impact of severe weather they will start taking environmentalists' views more seriously at the ballot box, National Journal reports.

More

Udall hopes compromise can avoid ballot box melee over Colo. fracking

Other observers may disagree, but Sen. Mark Udall, D-Colo., said Friday he's optimistic that a state-wide compromise can be reached over the location of drilling rigs, which would avoid having fracking become a local election issue in November, the Denver Business Journal reports.

More

Bill to halt fracking in Calif. gets turned back by state senate

A few Democrats joined with Republicans in the California Senate Thursday to reject a bill that would have imposed a moratorium on fracking, Reuters reports.

More

Chevron pulling the plug on its renewable power group

Earlier this year Chevron told employees of its renewable power group that its funding would be cut, despite the unit turning a profit of $27 million in its first full year of operations,

nearly double projections, Bloomberg Businessweek reports.

More

e-Golf to be Volkswagen's entry into US electric car market

Volkswagen will enter the all-electric car market in the U.S. in November, with the introduction of the e-Golf in ten states and the District of Columbia at a price tag of around $35,000 before any reductions from incentives, the Los Angeles Times reports.

More

Oil and gas producers launching IPOs at rapid rate

Four shale operators have launched initial public offerings so far this year, and three more will hit the markets in the coming weeks, FuelFix reports.

More

EPA must treat pollution sources same way in different regions: Court

The Environmental Protection Agency can't have one policy about dealing with pollution sources in one area, and a different policy elsewhere, according to a ruling from the U.S. Court of Appeals for the District of Columbia Circuit, E&E reports.

More

LG&E targeted by Sierra Club suit over coal ash overflows

The Sierra Club filed a lawsuit in U.S. District Court this week, charging that Louisville Gas & Electric has been polluting the Ohio River with water overflowing a coal ash containment pond, The Courier-Journal reports.

More

Greenpeace still fighting Statoil drilling despite Norway's rejection of its appeal

Greenpeace has been battling against Statoil plans to drill the most northerly well in the Arctic, blocking the site with its ship the Esperanza despite Norway rejecting an appeal from the environmentalists and establishing a safety zone intended to defeat the blockade, Reuters reports.

More

Signs of Ukraine, Russian compromise over gas

Kiev has agreed to wire Moscow $786 million in part payment for what it owes for natural gas, one sign of compromise after Ukrainian and Russian energy ministers met Friday in Berlin, The Wall Street Journal reports.

More

Upcoming Events

- May. 30, Golden, Colo.: Energy Secretary Ernest Moniz appears at Colorado Energy Forum hosted by Sen. Mark Udall, D-Colo. 10:00 am , Colorado School of Mines.
- Jun. 2, Washington: EPA Administrator Gina McCarthy announces proposed rule on greenhouse gas emissions from existing power plants. 10:30 am , 1201 Constitution Ave. N.W

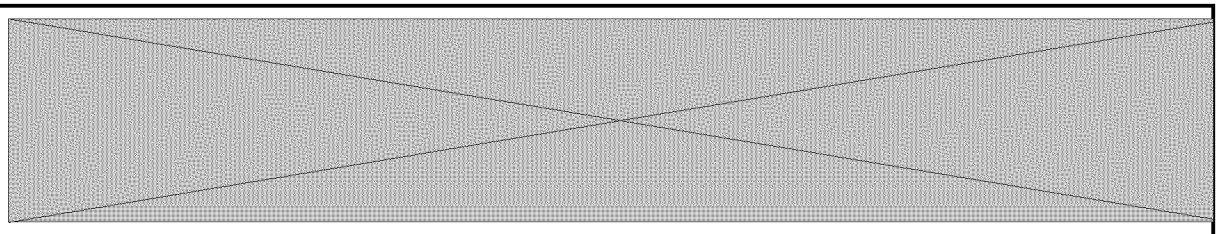
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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto World magazine
Sent: Sat 5/31/2014 4:01:23 PM
Subject: Reminder: Read the May Issue - Ward's 10 Best Interiors *



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NEW 2014 VERSION NOW AVAILABLE!

Light Vehicle Engines - North American Availability and Specifications
presented with MAHLE

Presenting Ward's
10 Best Interiors of 2014
The Lines Are Blurred Between
Luxury and Mainstream Interiors.

Dear Reader,

Our 2014 Ward's 10 Best Interiors honorees, even those hailing from non-premium brands, are so lavishly appointed that a question springs to mind: Where exactly does one draw the line between mainstream vehicles and those considered "luxury?"

Check out a detailed photo gallery and in-depth summary of each of our ten winners.

Check out our cover story now, and be sure to read these articles:

- **GM Flexes Global Muscle for Ecotec Engine Program -** When the first batch of the new family of Ecotec small gasoline engines from General Motors arrives this summer, they will represent the broadest and most ambitious use of the automaker's global engineering might in its 106-year history. **READ MORE**

- **My Column: Love Affair with Cars Not Fading** I spent a day last month being crushed in the crowd at the Beijing Motor Show, where the world's largest vehicle market also appears to be the most car-crazy. **READ MORE**

- **John McElroy's Column: GM, NHTSA Should Dig Deeper -** By zeroing in on one case, we're missing the bigger picture. And that could lead to wrong-headed

solutions. READ MORE

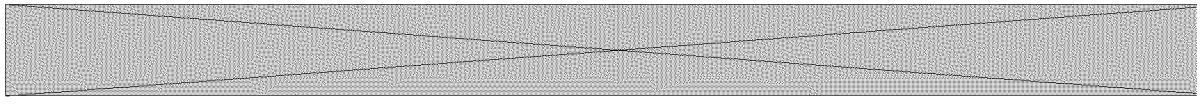
- **Story Behind Ward's 10 Best Engines: Ford 1.0L Ecoboost DOHC DI I-3 -** Good NVH without balance shaft is just one of many pint-sized innovations. READ MORE

- **New Wheels: Audi A3 -** Check out our test drive and photo gallery. READ MORE

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Drew Winter
Editor-in-Chief
WardsAuto World



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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Governors' Biofuels Coalition
Sent: Mon 6/2/2014 11:59:30 AM
Subject: Today's Biofuels News

Please add the Governors' Biofuels Coalition to your address book for uninterrupted delivery
View this email in a web browser.

NEWS UPDATE June 2, 2014

A Reduced Renewable Fuel Standard – The Philadelphia Story

Jessie Stolark, Environmental and Energy Study Institute • • Posted May 31, 2014

According to several news outlets, the Renewable Fuel Standard (RFS) 2014 Renewable Volume Obligates (RVOs) are now at the White House Office of Management and Budget (OMB) for review, and a final decision on the 2014 RVOs is expected sometime in June. With a decision imminent, it's worth asking how exactly the EPA got to a reduced biofuels target – despite a robust industry that met targets in many fuel categories last year and is now seeing commercial levels of advanced cellulosic fuels. A watchdog group – the Citizens for Responsibility and Ethics in Washington (CREW) is now asking if two Philadelphia area refineries may have played a role in the administration's decision. [read more ...]

Expert: Fears over RFS push investors away from biofuel

By Gabriella Dunn, Des Moines Register • • Posted June 2, 2014

The U.S. standard mixture of ethanol and gasoline is E10, which means 10 percent ethanol and 90 percent gasoline. Because corn ethanol produces more than 10 percent, the cellulosic biofuel industry confronts a saturated market. The EPA approved the use of E15 fuel, which increased the size of the ethanol market, but it hasn't yet become the industry standard. But straight biofuels and higher blends of ethanol, like E85, call for specialized pumps and cars that have limited availability throughout the nation. The expense of building E85 infrastructure is sometimes paid at the gas station's expense, or split with the fuel supplier on the contingency of selling only their fuel at the pump. Most E85 infrastructures are concentrated in the Midwest because proximity to the ethanol cuts down on transportation. But if trash-based ethanol becomes successful, it would open the door for ethanol production in all corners of the nation — and on a year-round basis. [read more ...]

EPA tees up 30% emissions cut as Obama promotes health benefits

Jean Chemnick, E&E reporter • • Posted June 2, 2014

President Obama raised the curtain this weekend on U.S. EPA's new proposal for existing power plants' carbon dioxide by making a public health plea, especially for children suffering from asthma and other respiratory illnesses. "Often, these illnesses are aggravated by air pollution — pollution from the same sources that release carbon and contribute to climate change," the president said in a message taped Friday during a surprise visit to Washington, D.C.'s Children's Hospital. "And for the sake of all our kids, we've got to do more to reduce it," he said. The message was released Saturday ahead of this morning's unveiling of the draft rule, which would limit emissions from the sector responsible for 40 percent of U.S. CO2. [read more ...]

Aurora ethanol plant restarts using govt. surplus sugar

By RUSSELL HUBBARD World-Herald Staff Writer • • Posted June 2, 2014

Aventine Renewable Energy Inc. said Thursday it has restarted ethanol production in Aurora using government surplus sugar in what is probably a first for the Cornhusker State. The ethanol producer, based in Pekin, Ill., said it has shipped the Aurora plant's first batches of sugar-based ethanol from the production complex that has been shuttered for various periods over the past few years. Ethanol from sugar in Iowa and Nebraska, the largest and second-largest U.S. ethanol producers, is almost an oxymoron. The states also rank first and third in production of corn, the main feedstock of the motor fuel. [read more ...]

Former EPA official joins transportation council board

Sean Reilly, E&E reporter • • Posted June 2, 2014

Former EPA official Margo Oge has joined the board of the International Council on Clean Transportation, the nonprofit research organization announced yesterday. Oge, who retired in 2012 after more than 30 years with EPA, headed its Office of Transportation and Air Quality for the final 18 years of her career. In that post, she was a key figure in crafting the Obama administration's fuel economy standards that will require the average light-duty vehicle to get 54.5 mpg by 2025. [read more ...]

Note: News clips provided do not necessarily reflect the views of coalition or its member governors.

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This message was sent to grundler.christopher@epa.gov from:

Governors' Coalition | P.O. Box 94922 | Lincoln, NE 68509
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Email Marketing by

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 6/2/2014 12:52:45 PM
Subject: RE: [Fueleconomy] Mistake on fuleeconomy.gov website - 2015 Audi A3 models
removed.txt

Hi Dave;

We have investigated your question and the error that now appears on the fuel economy dot gov web site. The A3 1.8L (front wheel drive) was originally correct as was the 2.0L A3 quattro (all-wheel drive). The problem occurred when we made a running change to add the Golf model to this dual displacement (1.8L & 2.0L) test group and they reprocessed the CSI in Verify. Verify scrambled the original engine configuration numbering and we will contact the Verify help desk to look into the reason why Verify does that.

I can rerun the labels, but before I do that I want to resolve this Verify issue since I have other dual displacement test groups and models still to be labeled.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, May 30, 2014 9:23 AM
To: Thomas, Richard (EEO)
Subject: FW: [Fueleconomy] Mistake on fuleeconomy.gov website - 2015 Audi A3 models

Richard,

Please let me know what you think about this customer's email.

If he is correct, please revise Verify when you get a chance.

Thanks

Dave

From: FuelEconomy [mailto:fueleconomy@ornl.gov]
Sent: Thursday, May 29, 2014 4:34 PM
To: Good, David
Subject: FW: [Fueleconomy] Mistake on fuleeconomy.gov website

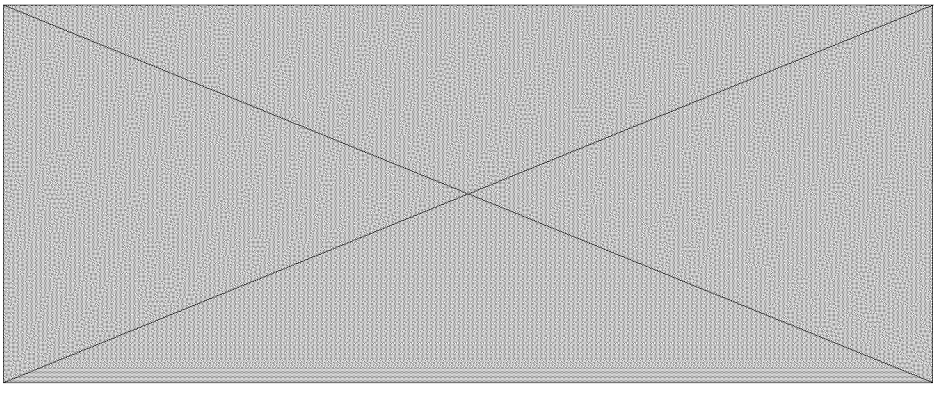
Hi Dave,

Mr. **Ex. 6** is referring to the 2015 Audi A3 models on our website:

http://www.fueleconomy.gov/feg/Find.do?action=sbs&id=34710&id=34771

The information on the official Audi website would suggest that the 2.0 L engine should be associated with the A3 Quattro while the 1.8 L engine is associated with the standard A3:

http://www.audiusa.com/models/audi-a3-sedan



Could you please let us know if a correction is needed? We appreciate the help.

Bob Boundy

Roltek, Inc., Supporting:

Oak Ridge National Laboratory

www.fueleconomy.gov

Email: boundyrg@ornl.gov

Phone: (856) 850-0766

From: Ex. 6 @yahoo.com]
Sent: Thursday, May 29, 2014 2:47 PM
To: FuelEconomy
Subject: [Fueleconomy] Mistake on fuleeconomy.gov website

To whom it may concern:

The Audi A3 Quattro comes with the 2.0 L turbocharged engine and all-wheel drive. While the standard Audi A3 comes with the 1.8 L turbocharged engine and front-wheel drive. Here is a link to the mistake: http://www.fueleconomy.gov/feg/Find.do?action=sbs&id=34771&id=34710 and here is a link to the Audi website: http://www.audiusa.com/models/audi-a3-sedan stating that the "...1.8-liter TFSI® turbocharged engine comes standard, while an available 220-horsepower, 2.0-liter TSFI® engine with quattro® all-wheel drive..."

With Regards,

Ex. 6

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Mon 6/2/2014 1:42:03 PM
Subject: RE: FVGAJ03.0AUD Open Cert Requests

Done.

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Monday, June 02, 2014 9:13 AM
To: Snyder, Jim
Subject: FVGAJ03.0AUD Open Cert Requests

Hello Jim,

Can you deny the other two open cert requests for the Testgroup: FVGAJ03.0AUD, Evap Families: FVGAR0140AAD and FVGAR0140NAF?

I'm having issues when trying to re-submit the data, Verify keeps saying that there are still locked CSI's referencing the tests in this testgroup. This way I'll re-run the tests, and resubmit the corrected data as a batch set.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Bunker, Byron[bunker.byron@epa.gov]; Olechiw, Michael[olechiw.michael@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: John German
Sent: Mon 6/2/2014 2:56:47 PM
Subject: Re: WVU report on LDV diesel PEMS testing

Byron/Michael/Linc,
Just wanted to let you know that we have released the WVU report and you can circulate it as you wish. It is on our website at:
<http://www.theicct.org/use-emissions-testing-light-duty-diesel-vehicles-us>

John

On May 30, 2014, at 8:58 AM, John German <john@theicct.org> wrote:

FYI. I am forwarding the email I sent to Ex. 7 of VW. Ex. 7 responded, saying he is on a trip this week and will contact me next week.
Also attached is the final WVU report. It hasn't been released yet, so please keep it within EPA for the time being (it should be released soon).

John

Begin forwarded message:

From: John German <john@theicct.org>
Subject: WVU report on LDV diesel PEMS testing
Date: May 28, 2014 1:45:25 PM EDT
To: Ex. 7

Ex. 7

Attached is WVU's final report on the 3 LDV diesel vehicles they tested, using PEMS. It hasn't been released yet, so please keep it within VW for the time being, but I thought you would appreciate a heads-up. It should be released publicly soon, although we do not intend to make a big press release out of the report. We plan on posting it on our website and letting it go into our RSS feed, but nothing more -- no publication announcement, no blogs, no twittering.

We have been discussing internally why the VW vehicles had such high emissions in-use. One thought was that in-use driving had higher loads and, thus, might be exceeding the capacity of the NOx control systems or the systems might not be calibrated as well at higher loads. However, the US06 test results for NOx at CARB were much lower than the in-use highway route (#1) used for the PEMS testing, even though the acceleration rates (Figure 3.12 in the report) and the CO2 emissions were much higher on the US06 than on the in-use highway route. In addition, the in-use

urban routes (#2- LA, #4-SD, #5-SF) had NOx emissions 2-3 times higher than the in-use highway route.

Another thought is that the catalyst might not be getting hot enough to work properly in-use, similar to the in-use HD diesel NOx issue. The problem I have with this theory is that NOx emissions over NEDC testing at CARB were quite low.
The following table compares the chassis dyno test data from the CARB logs (FTP, NEDC, US06) with the WVU PEMS results from Tables 4.3 and 4.6 of the report:

<PastedGraphic-2.pdf>

The NEDC includes a cold start (in fact, the cold start is weighted about 2.5 times higher than the cold start on the FTP, which likely explains the higher emissions on NEDC versus FTP). Figure 3.6 in the WVU report suggests that the NEDC has similar idle time and vehicle speeds to the in-use urban routes driven by WVU. Figure 3.12 suggests that acceleration rates were lower on the NEDC than for the in-use urban routes driven by WVU. Plus, the in-use urban routes were driven with about 10% higher vehicle weight, due to the weight of the PEMS system. The higher weight, higher acceleration rates, and lack of a cold start all should have generated higher catalyst temperatures on the in-use routes than on the NEDC. So, the data doesn't seem to support this theory either.

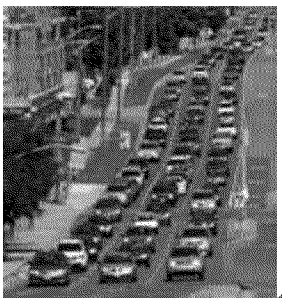
There is a potential issue with higher than expected CO2 emissions on the in-use urban routes, even after accounting for the increased weight. We do not know what caused this.

Anyway, we would appreciate it if you could share any insights with us on why the NOx emissions were so high in-use.

John

<WVU - PEMS diesel testing report for ICCT_Final - May2014.pdf>

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Sent: Mon 6/2/2014 3:08:02 PM
Subject: Air & Radiation Law News for June 2, 2014



Air & Radiation Law News

for June 2, 2014

Bloomberg BNA Daily Environment Report™

Air Pollution

D.C. Circuit Vacates 2012 EPA Air Memo, Says Permit Requirements Must Be Uniform

A federal appeals court vacated an Environmental Protection Agency memorandum directing regional air officials to apply different air permitting requirements in different states, a policy that the court said violated federal regulations...

Air Pollution

EPA Issues New Implementation Rule For 1997, 2006 Particulate Standards

The Environmental Protection Agency is issuing new implementation requirements for the 1997 and 2006 air quality standards for fine particulate matter in a final rule to be published in the Federal Register June 2....

Air Pollution

Sierra Club Joins States in Challenging EPA Approval of Virginia Ozone Plan

The Sierra Club petitioned a federal appeals court to review the Environmental Protection Agency's approval of a Virginia ozone plan that fails to address pollution that crosses state lines, joining two states in challenging the agency's...

Climate Change

McCarthy to Announce Power Plant Rule; Obama to Separately Speak on Proposal

Environmental Protection Agency Administrator Gina McCarthy will announce the agency's proposed carbon pollution guidelines for existing power plants June 2, and President Barack Obama plans to speak separately on the regulation...

Climate Change

Publication Delay on EPA Power Plant Rule Unusual, Not Unprecedented, Analysis Shows

The nearly four months it took for carbon pollution standards for new power plants to appear in the Federal Register was an unusual delay for an Environmental Protection Agency regulation but not unprecedented, according to a Bloomberg BNA...

Climate Change

RGGI States Hopeful Power Plant Rules Won't Penalize Them, N.Y. Official Says

States participating in the Regional Greenhouse Gas Initiative will be "watching carefully" when proposed Environmental Protection Agency rules for carbon dioxide emissions from existing power plants are announced June 2 to...

Climate Change

Survey Finds Cities Incorporating Climate Into Planning, but Economic Link Elusive

Cities are doing a better job of incorporating climate change preparations into their urban planning, but they still fail to see the link between environmental objectives and economic growth, according to a global survey conducted by the...

Emissions Trading

Policies in Australia, Russia, Japan Hurting Emissions Trading Market, World Bank Says

Efforts to put a value on greenhouse gas emissions to contain global warming are being hurt as Australia, Japan and Russia pull back from carbon reduction commitments, according to the World Bank....

Enforcement

Canada Unveils Nuclear Facility Reporting Guidelines

The Canadian Nuclear Safety Commission published May 29 final environmental reporting requirements for nuclear power plant operators. The regulatory document specifies information nuclear power plant licensees are required to submit...

Enforcement

NAFTA Agency May Examine Enforcement Of Salmon Aquaculture Rules by Canada

The three-country commission responsible for handling environmental issues under the North American Free Trade Agreement is considering further investigation of Canada's enforcement of its environmental rules governing salmon...



Early Skirmishes Over EPA Utility GHG Rule Preview Longer 'Pivotal' Battle

Days before EPA is slated to propose its ambitious greenhouse gas (GHG) rule for existing power plants, supporters and opponents are already engaged in skirmishes over the rule's potential costs and benefits, previewing what observers expect to be a "pivotal," drawn-out political and regulatory battle this summer

over EPA's climate policies.

EPA Rejects Retroactive Use Of Stricter PM2.5 Implementation Air Policy

EPA is rejecting environmentalists' calls to retroactively apply stricter implementation measures for states to comply with the agency's fine particulate matter (PM2.5) national ambient air quality standards (NAAQS), issuing a final rule that retains the agency's earlier proposal to require use of the stricter approach in air plans due later this year.

Despite Judge's Call, Courts Unlikely To Clarify Key Industry 'Standing' Test

Federal courts are not likely to clarify the application of the so-called "zone of interest" test that plaintiffs, especially industry plaintiffs, must meet to show standing when they sue over actions by EPA and other agencies, legal observers say, despite recent calls by a prominent appellate to clarify contradictory case law.

D.C. Circuit Scraps EPA Memo Limiting Scope Of Permit 'Aggregation' Ruling

The U.S. Court of Appeals for the District of Columbia Circuit has scrapped an EPA memo that attempted to limit the scope of a 6th Circuit decision undoing a key test for air permit reviews, finding the memo is a final agency action because it creates a new enforcement regime that unfairly advantages permitted facilities in the 6th Circuit.

Latest Blogs

Supreme Court Weighs Air 'Nuisance' Appeal

The Supreme Court could announce as early as June 2 whether it will grant industry's request to hear an appeal of a lower court's decision . . .

EPA Floats Deadlines To Resolve SO2 Designations Suit

EPA is proposing a consent decree to resolve litigation filed by environmentalists seeking long-overdue designations on which areas are attaining or exceeding the agency's sulfur . . .

Ohio Approves Bill Posing Hurdles For EPA ESPS Plan

Ohio's state legislature has approved legislation that could complicate the state's efforts to write a compliance plan for EPA's imminent climate existing source performance standard . . .

Greenwire

CLIMATE:

EPA proposes rule to slash power plant carbon by 30%

Jean Chemnick, E&E reporter

Published: June 2, 2014 at 9:36 AM

U.S. EPA unveiled a long-awaited proposal today that would slash carbon dioxide from existing power plants by 30 percent by 2030.

The proposal, a cornerstone of President Obama's Climate Action Plan, would curb emissions from a sector responsible for 40 percent of U.S. CO2.

A fact sheet accompanying the proposal adds that it will curb other pollutants including lead and soot by more than 25 percent in the same years.

In a taped address over the weekend, Obama said the new regulations would prevent up to 100,000 asthma attacks and 2,100 heart attacks in their first year being implemented.

"And those numbers will go up from there," he said.

The restrictions have already drawn fire from congressional Republicans and industry leaders who have promised to fight any rule they deem burdensome to the fossil fuels and utility sectors. Environmentalists who have sought for years to limit emissions linked to climate change have pledged to defend -- and, in some cases, strengthen -- the proposal.

CLIMATE:

States divided, wary as rule release draws near

Jean Chemnick, E&E reporter

Published: Friday, May 30, 2014

The planned release Monday of U.S. EPA's proposal for slashing heat-trapping emissions from existing power plants will shine a spotlight on how states will meet its mandate.

It's going to be complicated.

There's no single starting line. Where a state begins will depend on its politics and power supply. And every one of them is concerned that the coming rule won't fully protect its interests.

Opponents of the rule this week said it could hamstring some states.

The U.S. Chamber of Commerce sounded the alarm with a report emphasizing the rule's potential costs for states that depend heavily on fossil fuel-fired power plants. Prepared for the chamber's Institute for 21st Century Energy by IHS, the report used the business group's assumptions about the rule and future power demands to show that its costs would fall heavily on states with the most coal-fired generation.

The Southeastern states stand to lose 60,000 jobs and $10.5 billion in economic development every year through 2030 from the combined effects of EPA's rules for existing and new power plants, the report warned. The Upper Midwest's power market -- more evenly divided between coal and gas -- would lose nearly 32,000 jobs and take an economic hit of $7.4 billion each year, while lowest-carbon markets in New England and on the West Coast would be the best-positioned to meet the standards, it said.

And the National Republican Senatorial Committee quickly moved to tie Senate Democrats running for re-election this fall -- notably, Sens. Mary Landrieu of Louisiana, Kay Hagan of North Carolina and Mark Udall of Colorado -- to regulations that it said would penalize their states.

"Senate battleground states are largely coal-intensive states, which makes President Obama's upcoming EPA announcement even more important," the NRSC said in a blog post this week. "These states will be particularly hard hit by the rate spike that will come from the Obama Administration's cap-and-trade fiat."

Texas' congressional delegation, meanwhile, wrote a letter to EPA this week, charging that the Lone Star state's growing population and electricity demand could make it particularly vulnerable to the coming rulemakings.

"With a robust manufacturing base, and as the leading producer of oil, gas and petrochemical products, our state is an economic engine for the entire nation," stated the letter, signed by lawmakers of both parties. "Given such growth and potential, EPA should recognize that Texans require an all-of-the-above approach to power generation, not one that will raise the cost of electricity by selectively eliminating certain types of fossil fuels."

That's a message state lawmakers from Georgia, Nebraska and Kentucky tried to deliver yesterday to EPA's Washington, D.C., headquarters, but they failed to make an appointment and they say no one was available to meet with them.



On E&ETV's The Cutting Edge, reporter Jean Chemnick previewed the Obama administration's scheduled Monday rollout of carbon regulations for existing power plants. Click here to watch The Cutting Edge.

The delegation -- organized by the fossil fuels advocacy group Partnership for Affordable Clean Energy (PACE) -- says its members' constituents stand to lose from the rules, especially if EPA moves to require "systemwide" reductions from sources like demand-side energy efficiency and more renewable energy use.

Kentucky state Sen. Brandon Smith (R) told reporters he was wary of EPA "superimposing their judgment over what we think is good for the state."

Kentucky, a major mining state, derives about 90 percent of its power from coal. A minor shift toward natural gas is occurring, but Smith and his Democratic colleague, state Sen. Fitz Steele, said coal-mine closures were due at least in part to EPA regulations already on the books. Those, he said, had also affected other aspects of the Kentucky economy.

"They need to quit trying to run our state," said Steele, a coal miner himself for more than two decades. "They're trying to micromanage our states. They're coming in to tell us what's best for us."

Steele and Smith said EPA must respect states' "primacy" -- their right to determine how their utilities will be regulated under the Clean Air Act rule. EPA has said repeatedly that states are its partners in the rulemaking and that its guidance to them will be "flexible." It is expected to set standards, and states must write implementation plans.

But Lance Brown, PACE's executive director, said that by setting a standard for emissions reduction that can only be achieved through the use of certain technologies or policies, EPA would limit states' options.

"EPA has the ability to be very prescriptive without being prescriptive," he said.

'Measured, reasonable steps'

Several states have considered legislation they hope would limit the EPA rule's effect on their utility sector.

Nebraska -- a coal state that is also a hub for railroads that carry the fuel -- enacted such a measure last month by a wide margin.

"What we're asking is to take measured, reasonable steps in regulations addressing emissions," said Nebraska state Sen. Jim Smith (R), a participant in yesterday's fly-in.

While Nebraska is weighing renewable energy and efficiency mandates, he said, "we don't want to sacrifice our economy and sacrifice jobs to get there."

But environmentalists emphasize that while EPA has been accommodating to states, it is authorized to issue binding guidelines and to approve or reject state plans.

If states do not submit plans that are acceptable, they say, EPA might be compelled to step in with a less flexible federal plan that would be more onerous than a state plan would have been.

Aliya Haq, special projects director for climate at the Natural Resources Defense Council, said that most of these bills either failed or were weakened because state lawmakers recognized that they would "paint utilities into a corner."

"By trying to prevent flexible and clean alternatives to coal, these bills would have made it more difficult and expensive to cut carbon pollution," she said.

In comments submitted to EPA ahead of next week's release, fossil fuels-heavy states have asked the agency to confine its rule to minor heat-rate improvements that can be achieved inside the fence line of an individual power plant. They also want credit for reductions made since 2005 -- even those driven by market conditions -- and worry that EPA might go back on its promise to not require carbon capture and storage for existing plants.

But the World Resources Institute released its own analysis this week showing that 10 of the states situated in power markets that the chamber and others deemed to be in the greatest peril of price spikes from the EPA rule comply with even a relatively stringent, "beyond the fence line" rule of the kind environmentalists have urged EPA to adopt.

North Carolina could achieve reductions through its Renewable Energy and Energy Efficiency Portfolio Standard, which is already in place, WRI argued. It could also boost the efficiency of its coal-fired power plants and use its gas plants more.

The Tennessee Valley Authority, Tennessee's largest utility, already offers demand-side efficiency programs, WRI said.

"If Tennessee commits to achieving 1 percent annual energy savings, Tennessee could reduce CO2

emissions by 10 percent in 2020 compared to 2011 levels," the institute says.

Said David Doniger, director of the climate and clean air program at NRDC: "We think almost every state has to do something. Some states had planned to do it already."

Opportunity seen for late-moving states

But while the nine Northeastern states in the Regional Greenhouse Gas Initiative might be able to demonstrate that their existing policies are equivalent to what would be required by EPA, others may need to launch new initiatives.

Doniger said states that have not yet moved to cut carbon may have built-in advantages compared with states that have already plucked their proverbial "low-hanging fruit" of efficiency and renewable energy.

"The states that haven't done any of these things have opportunities that the states that have done them don't have," he said. "A state that hasn't built up renewables or an efficiency program has a very cheap pathway in front of it."

States that have already taken significant steps to slash carbon, meanwhile, have urged EPA to adopt a rule that would require other states to achieve similar reductions even if it takes them additional time to get there. In a letter to EPA last December, 15 early-mover states, including the RGGI members and California, asked the agency to propose a rule that takes into account past progress to curb emissions.

EPA should consider setting an emissions intensity target that would require all states to meet the same standard on a per-kilowatt basis -- ensuring that early movers would get full credit for their work.

They also asked for a rule that requires reductions across the power system, and not for the "inside the fence line" standard sought by their more fossil fuels-heavy counterparts.

Vicki Arroyo, executive director of the Georgetown Climate Center, has worked with the early movers to help formulate their stances on the rule. In an interview yesterday, she said their experience with carbon cutting and renewable energy and efficiency policies had shown them that a systemwide approach could be cost-effective.

"I think as far as the level of this standard, they would certainly want it to be something that reflects the ambition of some of these previous programs," she said.

States that have shaved double-digit percentages of carbon from their power-sector emissions in the last few years would not want other states to have virtually no obligations, she said.

"I think it's a lost opportunity for some of these cost-effective reductions," she said.

CLIMATE:

Details emerge on how Obama admin will unveil power plant rule

Jean Chemnick, E&E reporter

Published: Friday, May 30, 2014

President Obama will participate remotely in Monday's rollout of one of the centerpieces of his second-

term climate change agenda: U.S. EPA's proposal to curb power plant carbon dioxide emissions.

The president will be traveling in Europe but plans to participate in a call hosted by the American Lung Association and other health and medical organizations to emphasize why reducing CO2 emissions can help safeguard human health.

"We're excited to hear firsthand from the president about the proposal, and understand the public health benefits that are associated with it," said Paul Billings, vice president of national policy and advocacy for ALA.

While few details have been provided about the rule still at the White House ahead of Monday's release, Billings said the link between climate change and respiratory health is clear. Warmer temperatures mean more asthma-causing smog, he said. Furthermore, he said, by requiring power plants to limit their CO2 emissions, EPA will also encourage the reduction of sulfur dioxide emissions, nitrogen oxides and other pollutants that contribute to ozone.

The president will also make climate change the focus of his weekly address on Saturday, before departing for a trip that includes a visit to Poland -- a nation heavily dependent on coal-fired generation.

The ALA call will come after EPA Administrator Gina McCarthy holds a news conference unveiling the proposal, which will curb emissions from currently operating plants.

Democratic House leaders were among the first to be briefed on the proposal. White House adviser John Podesta yesterday met with several Democrats in the office of Minority Leader Nancy Pelosi (D-Calif.).

Rep. Gerry Connolly (D-Va.), who participated in the meeting, said that it took "a 30,000-foot" view, with few details about what is in the actual proposal.

While he was in the room, Connolly said, much of the discussion focused on the economic effects of the proposal -- which has been painted as a potential job-killer by the U.S. Chamber of Commerce and other opponents.

But Connolly said Virginia's shift toward natural gas for generation had actually reduced power costs.

"Certainly in my home state, they've gone down, not up," he said. Many utilities have already taken steps to limit CO2 and other emissions in recent years, and a report released earlier this week showed the sector had shed 13 percent of its greenhouse gas output between 2008 and 2012. Historically coal-heavy utilities like Duke Energy Corp. and Southern Co. were among the leaders in reducing their emissions, according to the report.

The EPA proposal may be the added push utilities need to make further reductions, said Connolly.

The report came as Senate Minority Leader Mitch McConnell (R-Ky.) pledged to renew his push to limit EPA's climate change rules through new legislation. McConnell's bid to use the Congressional Review Act to strike down EPA's new power plant proposal for CO2 ended yesterday when the Government Accountability Office ruled that draft rules do not meet the law's criteria.

Rep. Henry Waxman (D-Calif.) noted that the House has already voted numerous times to curtail EPA's climate rules, but all of those efforts have fallen short in the Senate. But having watched Republicans vote 50 times to kill Obama's healthcare reform law, the Energy and Commerce Committee ranking member said GOP members might do the same with these rules. But they won't succeed, he said.

"We're not talking about successful efforts to change the Clean Air Act or stop these rules," he said.

Reporter Nick Juliano contributed.

AIR POLLUTION:

Court rejects EPA guidance on aggregate 'major source' permitting

Jeremy P. Jacobs, E&E reporter

Published: Friday, May 30, 2014

An appeals court vacated a U.S. EPA guidance on determining whether to combine multiple, adjacent air pollution sources for permitting.

The U.S. Court of Appeals for the District of Columbia Circuit held EPA cannot treat pollution sources in one region differently from those in others because of an adversarial court ruling.

At issue is EPA's response to a 2012 6th U.S. Circuit Court of Appeals ruling in *Summit Petroleum Corp. v. EPA*. The court held that EPA couldn't aggregate certain pollution sources -- in that case, natural gas wells and a refinery -- that were not geographically adjacent into a single stationary source for permitting under the Clean Air Act.

After the ruling, EPA in December 2012 issued a "summit directive" to its regional offices saying the agency could no longer consider functional "interrelationships" within the 6th Circuit in establishing "major sources" that require permits that specify emission limits, monitoring mandates and other requirements.

Outside the 6th Circuit states -- Michigan, Ohio, Kentucky and Tennessee -- EPA said its policy would remain the same.

An industry coalition, the National Environmental Development Association's Clean Air Project, challenged the guidance. It claimed the document put companies outside the 6th Circuit at a competitive disadvantage because they face more stringent permitting requirements.

EPA contended the coalition lacked standing, meaning it failed to show how it was directly harmed by the guidance memo. Further, the agency said the challengers failed to raise a concrete issue and that the Clean Air Act didn't require EPA to act uniformly across the country in its permitting program.

The D.C. Circuit rejected EPA's contentions.

"We find no merit in EPA's arguments," Senior Judge Harry Edwards wrote. "The *Summit* Directive creates a standard that gives facilities located in the Sixth Circuit a competitive advantage. It therefore causes competitive injury to Petitioner's members located outside the Sixth Circuit."

Further, Edwards, a Democratic appointee, wrote on behalf of the unanimous three-judge panel that the memo is "plainly contrary to EPA's own regulations, which require EPA to maintain national uniformity in measures implementing" the Clean Air Act.

Click here to read the opinion.

PEOPLE:

Former EPA official joins transportation council board

Sean Reilly, E&E reporter

Published: Friday, May 30, 2014

Former EPA official Margo Oge has joined the board of the International Council on Clean Transportation, the nonprofit research organization announced yesterday.

Oge, who retired in 2012 after more than 30 years with EPA, headed its Office of Transportation and Air Quality for the final 18 years of her career. In that post, she was a key figure in crafting the Obama administration's fuel economy standards that will require the average light-duty vehicle to get 54.5 mpg by 2025.

"I'm very pleased that Margo agreed to join us," Dan Greenbaum, chairman of the council's board, said in a news release. "The policies she spearheaded at EPA are among the most significant steps forward in clean transportation, and she will bring the same passion and skill to the ICCT."

Since her retirement, Oge has been a visiting scholar at the Washington, D.C.-based council, which describes its work as furnishing unbiased research and analysis to environmental regulators, according to her LinkedIn profile. She also serves as vice chairwoman of the board at DeltaWing Technologies, a Georgia firm, and is on the National Academies' Board on Energy and Environmental Systems, the profile indicates.

AUTOS:

Consumer Reports finds Honda hybrid doesn't live up to label

Published: Friday, May 30, 2014

Honda Motor Co.'s 2014 gas-electric hybrid Accord failed to reach its window-sticker average in *Consumer Reports*' road test, though the car still rated as the most fuel-efficient U.S. midsize sedan.

The $29,155 car averaged 40 mpg when driven in a combination of highway and city driving, the magazine said in a statement yesterday, but failed to reach the 47 mpg advertized on the U.S. EPA window sticker rating for city/highway driving.

"We've found that the EPA tests often exaggerate the fuel economy of hybrids," said Jake Fisher, *Consumer Reports*' director of automotive testing.

Honda's hybrid also had cabin noise issues, less ride comfort and worse emergency handling than the 4-cylinder-engine gasoline version, the magazine said.

It's not the first hybrid to fail the road test; the magazine found major shortfalls in the fuel economy of Ford Motor Co.'s Fusion and C-Max hybrids in 2012.

"We're very happy to see that in *Consumer Reports*' testing, they confirmed that its 40 miles per gallon average ranks it as the most fuel-efficient four-door midsize sedan that they've measured in at least the last 10 years," Honda spokesman Chris Martin said. "Actual Accord Hybrid owners have reported even better mileage in their real-world experiences" (Alan Ohnsman, Bloomberg, May 29). **-- JL**

ELECTRIC VEHICLES:

Tesla plans first Va. dealership in Tysons Corner

Published: Friday, May 30, 2014

After a legal compromise last year settled a thorny dispute with Virginia, Tesla Motors Inc. plans to open its first electric car dealership in the state near Washington Dulles International Airport.

The California automaker sued the state after the Virginia Department of Motor Vehicles rejected its license application to open a company-owned dealership. Virginia is among several states, also including New Jersey, Ohio, Missouri and Arizona, where Tesla has been fighting against rules requiring cars to be sold through authorized franchisees.

The company, state and the Virginia Automobile Dealers Association reached a deal last fall, however, allowing Tesla a single license in Northern Virginia if it agreed to withdraw the suit.

Yesterday, a prominent developer in the Tysons Corner area submitted zoning plans to turn a warehouse into a venue for vehicle sales. The project is being designed by the same architectural firm that designed Tesla's Los Angeles showroom. The developer, the Georgelas Group, declined to comment.

No hearing before the Fairfax County Planning Commission has been scheduled (Jonathan O'Connell, *Washington Post*, May 30). **-- DTB**

ClimateWire -- Mon., June 2, 2014 -- **Read the full edition**

1. POLITICS: Angst on the campaign trail as climate change becomes a key issue

U.S. Rep. Gary Peters is locked in one of the nation's closest Senate races, and he's gambling that climate change will help him win it. But he's not rushing to support the landmark carbon standard being released today by the White House.

2. REGULATION: EPA power plant rule will shoot for 30% reductions -- sources

U.S. EPA will seek to cut up to 30 percent of cutting carbon dioxide from existing power plants before 2030. EPA Administrator Gina McCarthy will propose today the first-ever limits on greenhouse gases from the nation's power plants under Section 111(d) of the Clean Air Act, the most significant move to date in the Obama administration's effort to curb climate change.

3. NEGOTIATIONS: Observers cautiously optimistic that aggressive new EPA power plant rule may help 2015 deal

The Obama administration's proposed power plant regulations out today are a "welcome development" for the global climate change negotiations, U.N. Framework Convention on Climate Change Executive Secretary Christiana Figueres will say in a statement today.

TODAY'S STORIES

4. **ADAPTATION:** Navy, Va. officials focus on protecting region with massive base from sea-level rise

5. **BIOFUELS:** Dueling studies highlight focus on climate impacts of renewable fuel standard

6. **STATES:** Albany insider doubts effects of EPA climate rule will be 'pervasive' in N.Y.

7. **RESEARCH:** Durable design solves critical problem in making fuel from water

8. **NATIONS:** Upcoming election could impact Indonesia's rainforest protection program -- panel

9. **ADAPTATION:** NYC implements programs to protect water supply from storms

10. **SCIENCE:** Denier groups 'isolate' climate scientists, IPCC working group co-chairman says

11. **NATIONS:** Filipino response to Haiyan slow and muddled -- local authorities

12. **TRANSPORTATION:** Volkswagen to unveil first electric car in U.S.

E&ETV's OnPoint

13. **CLIMATE:** Mass. environment Commissioner Cash talks economic impacts of EPA climate rule

EnergyWire -- Mon., June 2, 2014 -- **Read the full edition**

1. TECHNOLOGY: Can Calif. rule in energy storage?

California, land of Google Inc., Apple Inc. and Hollywood, wants to add one more to the roster of industries it dominates. This time it's energy storage, an absolutely enormous emerging market where it has quietly been developing a substantial lead.

TOP STORIES

2. **CLIMATE:** Days before new carbon rules, Kan. coal plant gets the green light

3. **LNG:** Md. export project wins key permit as experts assess impact of DOE revisions

4. **KEYSTONE XL:** PHMSA cites local power over pipelines in TransCanada letter

ELECTRICITY

5. **ELECTRICITY:** N.Y. 'zombie' plant caught up in Texas litigation over facility ownership

OIL AND GAS

6. **OFFSHORE DRILLING:** Industry fights 'false sense of security' as hurricane season starts

7. **COURTS:** Mich. AG says Chesapeake should stand trial in lease-rigging case

8. **SPILLS:** Coast Guard launches hearings on Houston Ship Channel wreck

9. **OFFSHORE DRILLING:** $10B Canary Islands oil project gets green light from Spain

10. **BUSINESS:** Cheniere proposes stock increase for higher staff pay

11. **OIL AND GAS:** Colo. firms experiment with walls around work sites

12. **OFFSHORE DRILLING:** For safety's sake, ex-senator seeks exception to Cuban embargo

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Office of General Counsel

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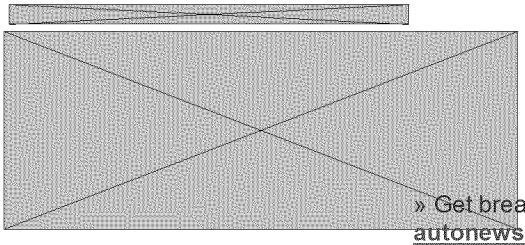
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http://www.surveymonkey.com/s/epalibsurvey

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 6/2/2014 8:56:49 PM
Subject: DAILY: Why the new Mustang may gain 200-300 pounds | Kia mulls plant in Mexico | Chrysler airbag recall being probed by U.S. | Ann B. Davis starred for Ford | King speaks to UAW convention

Today's most read story

Google's vision upends notions of car and driver

June 2, 2014



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TOP NEWS

New Mustang expected to gain 200-300 pounds, modifier says

4:17 pm U.S. ET | Jun 2

Ford has pledged to reduce the weight of its vehicles with each redesign. The next Mustang may fall short of that goal. ... » READ

Kia plans first assembly plant in Mexico, report says

11:10 am U.S. ET | Jun 2

Kia Motors plans to break ground soon on a new plant in Mexico, two sources familiar with the matter told Reuters, a further sign that the company and its affiliate, Hyundai, are easing an unofficial moratorium on capacity growth. ... » READ

Advertisement



Paragon Honda Presenting at the TLS Auto Customer Centricity Summit

Effectively Utilizing Mobile Marketing - Constant connectivity has created new challenges that mobile marketing can help solve. **Brian Benstock, VP & GM** will explain how Paragon Honda has aligned marketing messages across mobile and other channels and how they created consistent, transparent, program driven marketing campaigns that result in increased retention and loyalty.

For more info visit
http://www.tlsummits.com/2014customercentricity/index.h

Chrysler airbag recall being probed by U.S. regulators

UPDATED: 6/2/14 11:30 am ET - adds new story
9:25 am U.S. ET | Jun 2

Chrysler Group may be facing a recall do-over after the fix it initiated to stop inadvertent airbag deployments in older Jeep Libertys and Grand Cherokees failed in at least six instances to fix the problem. ... » READ

Before 'The Brady Bunch,' Ann B. Davis starred for Ford

3:23 pm U.S. ET | Jun 2

Before actress Ann B Davis was Alice, the live-in maid on the 1970s sitcom "The Brady Bunch," she lent her wisecracking humor to a saucy commercial for the mid-sized Ford Fairlane, detailing "that Fairlane feeling." ... » READ

New F-150 spied on road near Detroit

10:06 am U.S. ET | Jun 1

This 2015 Ford F-150 was seen driving undisguised in suburban Detroit on Sunday. The aluminum-bodied truck begins production later this summer. The lightweight body saves as much as 700 pounds over the outgoing steel-bodied truck. ... » READ

MOST READ (Last 7 days)

Ford to recall nearly 1.4 million vehicles in N.A.

Hyundai leapfrogs Honda to become greenest automaker in U.S., scientists say

Ford's shift upscale across Europe draws skeptics

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Motor Trend, Automobile magazines reshaped in consolidation

King makes the case to UAW delegates for dues hike

4:05 pm U.S. ET | Jun 2

Auto loan terms, monthly payments hit high in Q1, Experian says

8:30 am U.S. ET | Jun 2

Marchionne pins success of Fiat Chrysler plan on U.S.

3:34 pm U.S. ET | Jun 1

Fiat to get Mitsubishi pickup, sources say

12:01 am U.S. ET | May 31

WEEKLY NEWS QUIZ

» 2014 Automotive News/Equilar CEO Compensation Study ...

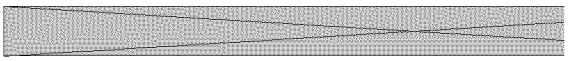
UPCOMING EVENTS

» June 3 - Rising Stars

» June 4 - ANE Congress

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For



GM asks judge to protect information sought by consumer advocate

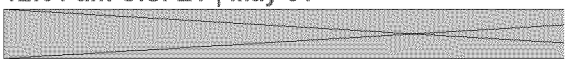
UPDATED: 5/31/8:45 am - adds Ditlow comment

4:31 pm U.S. ET | May 30



DeltaWing designers pitch wedge-shaped street car

12:01 am U.S. ET | May 31



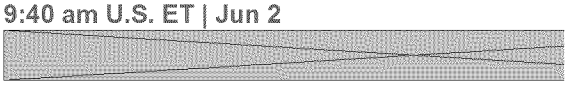
Autoliv to pay $65 million to settle U.S. antitrust suits

5:58 am U.S. ET | Jun 2



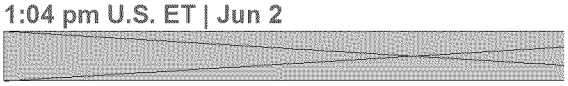
King seeks unity as UAW tries to organize transplants, preps for Detroit 3 talks

9:40 am U.S. ET | Jun 2



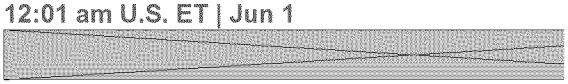
VW works councils rep vows continued support for UAW in Chattanooga

1:04 pm U.S. ET | Jun 2



Win at Indy is a win for cancer fight

12:01 am U.S. ET | Jun 1



UPCOMING WEBINARS

» June 12 - Group Vehicle Redistribution
by FirstLook

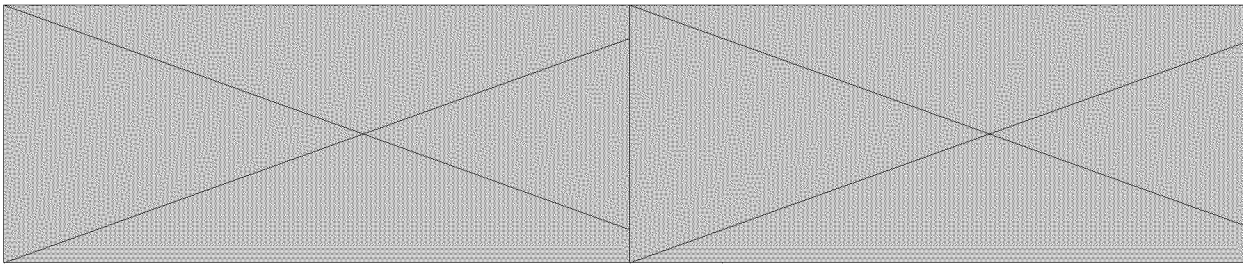
» June 24 - Automotive Innovation
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» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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. .

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 6/3/2014 10:13:33 AM
Subject: FW: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hi Dave;

As I noted in yesterday's email we are working with the help desk to see why Verify renumbered the engine configurations causing the engine displacement error on the fuel economy guide web site. I did go ahead and corrected four labels for the 2015 Audi A3 models so that the A3 front is 1.8L while the A3 quattro models are 2.0L.

Thanks,

Richard

From: Rodgers, William (EEO)
Sent: Monday, June 02, 2014 3:23 PM
To: 'Ex. 4 - CBI @csc.com'
Cc: Giles, Michael (EEO); Allen, Gregory (EEO)
Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hello Ex. 4 - CBI

Transaction Id: _4f47478a-53db-45bd-a48d-fc9460c45612

When you reload the "Report" file from this transaction to the Verify CDX\Test Group screen it re-numbers engine configuration numbers and ignores existing xml tags. This poses a problem when making updates or corrections from previous xml Report files as we do often.

Note - The engine configuration number is used by the fuel economy program and drives the engine descriptions on the EPA fuel economy guide website. When configuration numbers change from what was first input and labelled, it potentially creates erroneous model/engine descriptions online.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Giles, Michael (EEO)
Sent: Monday, June 02, 2014 1:31 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

From: Ex. 4 - CBI @csc.com] **On Behalf Of** Verify Help Desk
Sent: Monday, June 02, 2014 12:37 PM
To: Giles, Michael (EEO)
Cc: Harris, Dale (EEO); Allen, Gregory (EEO); Thomas, Richard (EEO)
Subject: Re: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hello Mr. Giles,

Verify help desk ticket HLP-5220 was opened for your inquiry. Will you please send your test group submission file or the transaction id for the test group submission?

Ex. 4 - CBI

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

"Giles, Michael (EEO)" <michael.giles@vw.com>

06/02/2014 08:49 AM

To Verify Help Desk@CSC
cc "Harris, Dale (EEO)" <Dale.Harris@vw.com>, "Allen, Gregory (EEO)" <Gregory.Allen@vw.com>, "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>
Subject VW Group - Problem with VERIFY engine configuration re-numbering.

Hello Ex. 4 - CBI,

We have found an issue with VERIFY which is causing errors in test group data during load of the XML for updates or corrections.

The issue is that the form quietly removes existing engine configuration values in the Test Group form when loading an XML, and replaces with new numbers matching the input sequence. This small change can cause significant headaches when doing fuel economy labeling which relies on the engine configuration value.

Steps to Reproduce Engine configuration ordering problem which can occur when a correction is made to an engine configuration in a test group data set:

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2) Open XML with text editor and note the ordering of the 3 repeating EngineConfigurationDetails:
a. First in sequence: **211HP** with EngineConfigurationNumber = **3**
b. Second in sequence: **170HP** with EngineConfigurationNumber = **1**
c. Third: **220HP** with EngineConfigurationNumber = **2**
d. **Note that these elements come out of VERIFY "out of sequence" 3,1,2 … but since the engconfig# value tags are associated, this should not really be a problem.**

3) Re-Open file in VERIFY form. Note that the original configuration numbers have been disposed and that the 3 entries are now re-numbered to match their sequential order, rather than the engine configuration number:
a. First in sequence: **211HP with** EngineConfigurationNumber = 1

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c. Third: **220HP** with EngineConfigurationNumber = **3**
d. **Note that this scrambles the original engineconfiguration number which was associated with each engine.**
e. **A save can be done to confirm that the values above are now stored in the XML file.**

Please let us know if you can reproduce this issue. We are hoping that it is possible to correct this soon. Please advise.

Regards,
Mike

Michael Giles
Certification Engineer
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4229
Fax: 248 754 4207
mailto: Michael.Giles@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Tue 6/3/2014 5:08:19 PM
Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220) [Thanks] NNTO

Thanks

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, June 03, 2014 6:14 AM
To: Good, David
Subject: FW: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hi Dave;

As I noted in yesterday's email we are working with the help desk to see why Verify renumbered the engine configurations causing the engine displacement error on the fuel economy guide web site. I did go ahead and corrected four labels for the 2015 Audi A3 models so that the A3 front is 1.8L while the A3 quattro models are 2.0L.

Thanks,

Richard

From: Rodgers, William (EEO)
Sent: Monday, June 02, 2014 3:23 PM
To: Ex. 6 @csc.com'
Cc: Giles, Michael (EEO); Allen, Gregory (EEO)
Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hello **Ex. 6**

Transaction Id: _4f47478a-53db-45bd-a48d-fc9460c45612

When you reload the "Report" file from this transaction to the Verify CDX\Test Group screen it

re-numbers engine configuration numbers and ignores existing xml tags. This poses a problem when making updates or corrections from previous xml Report files as we do often.

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Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Giles, Michael (EEO)
Sent: Monday, June 02, 2014 1:31 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

From: [Ex. 6 @csc.com] **On Behalf Of** Verify Help Desk
Sent: Monday, June 02, 2014 12:37 PM

To: Giles, Michael (EEO)
Cc: Harris, Dale (EEO); Allen, Gregory (EEO); Thomas, Richard (EEO)
Subject: Re: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hello Mr. Giles,

Verify help desk ticket HLP-5220 was opened for your inquiry. Will you please send your test group submission file or the transaction id for the test group submission?

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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"Giles, Michael (EEO)" <michael.giles@vw.com>

06/02/2014 08:49 AM

To Verify Help Desk@CSC
cc "Harris, Dale (EEO)" <Dale.Harris@vw.com>, "Allen, Gregory (EEO)" <Gregory.Allen@vw.com>, "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>
Subject VW Group - Problem with VERIFY engine configuration re-numbering.

Hello **Ex. 6**

We have found an issue with VERIFY which is causing errors in test group data during load of the XML for updates or corrections.

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d. **Note that these elements come out of VERIFY "out of sequence" 3,1,2 … but since the engconfig# value tags are associated, this should not really be a problem.**

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e. **A save can be done to confirm that the values above are now stored in the XML file.**

Please let us know if you can reproduce this issue. We are hoping that it is possible to correct this soon. Please advise.

Regards,
Mike

Michael Giles
Certification Engineer
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4229
Fax: 248 754 4207
mailto: Michael.Giles@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 6/3/2014 6:05:51 PM
Subject: RE: 2015 Audi 2.0L FFV Test Group Fuel Economy Labels

Okay, thanks Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, June 03, 2014 1:54 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: RE: 2015 Audi 2.0L FFV Test Group Fuel Economy Labels

Richard,

I'm in the process of running an updated 2015 FE Guide and sending the data to DOE.

I'll just send to DOE whatever data is in Verify (error free) and releasable. The query will be run in the next few minutes. I'll send it to DOE later today or tomorrow.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, June 03, 2014 1:36 PM
To: Good, David
Cc: Snyder, Jim
Subject: 2015 Audi 2.0L FFV Test Group Fuel Economy Labels

Hi Dave;

I just completed five 2015 labels for the carry over 2.0L automatic quattro models, index

numbers 064 through 068, into Verify. These models are on the ship to the US and we expect to have a rolling release of these models once they arrive here next week. Label indexes 064, 065 and 066, are carried over but of course the projected volumes are changed so that the sales weighted unrounded numbers are now slightly different. I would like to be sure that there are no rounding errors for these labels as I expect the values will go on Monroney labels next week.

We also have the 3.0L supercharged V6 gasoline models that will be arriving of the same ships. We just spoke to Jim who said he would put the Audi 3.0L V6 test group FVGAJ03.0AUD on the top of his list for issuance of the certificate. I cannot enter labels into Verify until we have a certificate issued. This test group contains nine model type labels that also have to be completed, with the exception of the Audi SQ5 where we have new data. All the other specific model type labels (eight) are carried over.

I don't know your schedule for the audit of labels, but could you let me know if you prefer to have all these new 2015 labels together or could you look at only the index 064-066 labels now?

If you have time you can give me a call to discuss.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 6/3/2014 6:18:49 PM
Subject: FW: Fw: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

FYI.....

From: Giles, Michael (EEO)
Sent: Tuesday, June 03, 2014 2:17 PM
To: Verify Help Desk
Cc: Harris, Dale (EEO); Allen, Gregory (EEO); Thomas, Richard (EEO); Rodgers, William (EEO)
Subject: RE: Fw: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Thanks for the fast follow up **Ex. 6**.

Can you keep us informed about when the fix might occur if possible.

Thanks

Mike

From: **Ex. 6** **On Behalf Of** Verify Help Desk
Sent: Tuesday, June 03, 2014 2:15 PM
To: Giles, Michael (EEO)
Cc: Harris, Dale (EEO); Allen, Gregory (EEO); Thomas, Richard (EEO); Rodgers, William (EEO)
Subject: Re: Fw: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

Hello Mr. Giles,

This issue has been documented in Verify-12883, the fix for which will be deployed in a future release. We will discuss this issue with the EPA.

Ex. 6

Verify Help Desk
Ex. 6
Contractor to the Environmental Protection Agency

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Ex. 6

06/03/2014 12:44 PM

To verifyhelp@ Ex. 6

cc

Subject Fw: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

----- Forwarded by Ex. 6 USA/CSC on 06/03/2014 12:40 PM -----

From: "Rodgers, William (EEO)" <William.Rodgers@vw.com>

To: Ex. 6

Cc: "Giles, Michael (EEO)" <michael.giles@vw.com>, "Allen, Gregory (EEO)" <Gregory.Allen@vw.com>

Date: 06/02/2014 03:23 PM

Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

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Transaction Id: _4f47478a-53db-45bd-a48d-fc9460c45612

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Bill Rodgers
Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.
Engineering and Environmental Office

Auburn Hills, MI
(248) 754-4219
william.rodgers@vw.com

From: Giles, Michael (EEO)
Sent: Monday, June 02, 2014 1:31 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

From: Ex. 6 **On Behalf Of** Verify Help Desk
Sent: Monday, June 02, 2014 12:37 PM
To: Giles, Michael (EEO)
Cc: Harris, Dale (EEO); Allen, Gregory (EEO); Thomas, Richard (EEO)
Subject: Re: VW Group - Problem with VERIFY engine configuration re-numbering (HLP-5220)

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Ex. 6
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"Giles, Michael (EEO)"
<michael.giles@vw.com>

06/02/2014 08:49 AM

To Ex. 6
cc "Harris, Dale (EEO)" <Dale.Harris@vw.com>, "Allen, Gregory (EEO)" <Gregory.Allen@vw.com>, "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>

Subject VW Group - Problem with VERIFY engine configuration re-numbering.

Hello Ex. 6,

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Michael Giles
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Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4229
Fax: 248 754 4207
mailto: Michael.Giles@VW.com

To: French, Roberts[french.roberts@epa.gov]
Cc: Wright, DavidA[Wright.DavidA@epa.gov]; Ex. 7 @vw.com]
From: Ex. 7
Sent: Tue 6/3/2014 6:36:57 PM
Subject: RE: VW 2013 GHG Report
CBI_DVWXV_COMMON_CR1A_CAR_R02.pdf

Hello Rob,

In response to your question to Ex. 7 the following is provided. We submitted a joint CAFE/GHG report through VERIFY by the March 31 deadline. The final report is submitted through VERIFY after all errors are resolved and the CAFE/GHG calculations match and are confirmed by EPA.

The full 2013 model year final GHG report, due May 1 per §86.1865-12, was also submitted. I have attached a copy for your reference.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

E-Mail: Ex. 7

From: Ex. 7
Sent: Tuesday, June 03, 2014 1:55 PM
To: Ex. 7
Subject: FW: VW 2013 GHG Report

Fyi…

From: French, Roberts [mailto:french.roberts@epa.gov]
Sent: Tuesday, June 03, 2014 8:05 AM
To: Ex. 7
Cc: Wright, DavidA
Subject: VW 2013 GHG Report

Ex. 7

Has VW submitted a 2013 model year final GHG report per 86.1865-12(l)(2)? I could not find it in Verify, but perhaps it got mis-categorized.

Thanks,

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

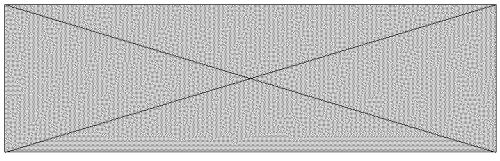
(734) 214-4380

To: Bunker, Byron[bunker.byron@epa.gov]
From: Automotive News
Sent: Tue 6/3/2014 7:55:18 PM
Subject: P.M. NEWSCAST: U.S. sales hit best pace since 2006, Chrysler extends winning streak | VW sport-utility boom? | Bailout perspectives

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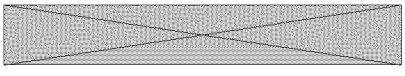
June 3, 2014



50 straight for Chrysler »

VW sport-utility boom? »

Bailout perspectives »



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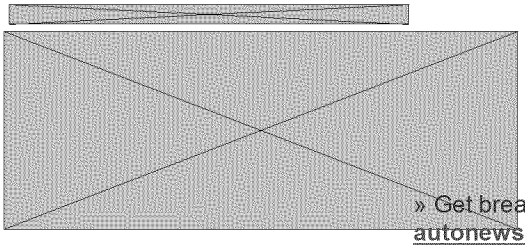
. .

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 6/3/2014 8:50:43 PM
Subject: DAILY: Auto sales rise 11% as 'everything came together' | UAW delegates OK 25% dues hike | VW weighs tripling SUV lineup | Lincoln's MKC trickles into showrooms

Today's most read story

Auto sales rise 11% as 'everything came together'

June 3, 2014



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TOP NEWS

MAY U.S. AUTO SALES

Auto sales rise 11% as 'everything came together'

UPDATED: 6/3/14 4:36 pm ET
8:15 am U.S. ET | Jun 3

U.S. light-vehicle sales -- led by big gains at Nissan, Toyota, Chrysler and GM -- rose 11 percent to 1.6 million in May as a raft of discounts and extended holiday deals drew consumers to showrooms. The annualized pace of sales shot up to 16.8 million. ...

» READ

UAW delegates approve 25% dues hike in contentious vote

3:58 pm U.S. ET | Jun 3

UAW delegates -- following a contentious debate -- today approved a 25 percent dues increase for members that will raise about $50 million annually by taking an extra half-hour of pay a month from rank-and-file workers. The increase takes effect in August. ...

» READ

Advertisement

Paragon Honda Presenting at the TLS Auto Customer Centricity Summit

Effectively Utilizing Mobile Marketing - Constant connectivity has created new challenges that mobile marketing can help solve. **Brian Benstock, VP & GM** will explain how Paragon Honda has aligned marketing messages across mobile and other channels and how they created consistent, transparent, program driven marketing campaigns that result in increased retention and loyalty.

For more info visit
http://www.tlsummits.com/2014customercentricity/index.h

VW weighs tripling SUV lineup to overtake Toyota, report says

6:33 am U.S. ET | Jun 3

Volkswagen AG is considering tripling the namesake VW brand's SUV lineup in a bid to overtake Toyota in global sales, two people familiar with the matter told Bloomberg. ... » READ

VW's key crossover for U.S. delayed by incentive tug-of-war, report says

5:19 pm U.S. ET | Jun 2

A tug-of-war between Mexico and Tennessee over financial incentives is delaying Volkswagen's decision on where to build a make-or-break crossover in North America, sources told Reuters, delaying the German group's efforts to fix its ailing U.S. business. ... » READ

Lincoln's MKC trickles into showrooms

4:15 pm U.S. ET | Jun 3

The 2015 MKC, Lincoln's entry in the fast-growing compact luxury crossover segment, appeared on the sales charts for the first time in May with 677 units sold. ... » READ

Ford edges Chrysler for top spot in May sales in Canada

3:00 pm U.S. ET | Jun 3

Ford edged out Chrysler for the top spot in May vehicle sales in Canada by 256 units. Ford of Canada said it sold 31,754 vehicles in May while Chrysler Group said it delivered 31,498 units during the month. But for the year to date, Chrysler holds a lead of 7,314 vehicles over Ford in Canada. ... » READ

MOST READ (Last 7 days)

Ford to recall nearly 1.4 million vehicles in N.A.

Motor Trend, Automobile magazines reshaped in consolidation

U.S. seeks to fund Alcoa's bet on automotive aluminum

Tesla's Musk says Space Taxi could ferry astronauts by 2016

Hyundai drops turbo, moving Genesis coupe upscale for 2015

Viral video rankings for week of 6/3/2014

Google, Hyundai-Kia World Cup ads are hits

12:01 am U.S. ET | Jun 3

Google's promo for its self-driving car prototype that made headlines last week was a hit. ... » Watch the videos

Chevy, cars, fleet shipments help GM overcome recall crisis

1:33 pm U.S. ET | Jun 3

How Ghosn aims to catch Toyota, GM, VW

12:01 am U.S. ET | Jun 3

UPCOMING EVENTS

» June 3 - Rising Stars

» June 4 - ANE Congress

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

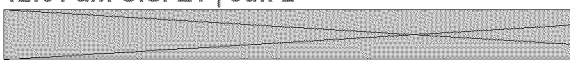
» June 12 - Group Vehicle Redistribution by FirstLook

» June 24 - Automotive Innovation by IBM



BMW's big workload: New segments, growing lineups

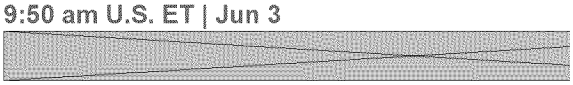
12:01 am U.S. ET | Jun 2



GM sued by Ark. used-car dealer for damages from 'dangerous' car inventory

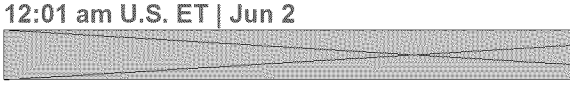
UPDATED: 6/3/2014 10:52 am ET - adds suit, corrective

9:50 am U.S. ET | Jun 3



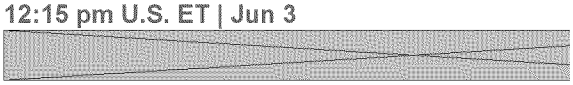
Chevy dealer boosts staff for recall surge

12:01 am U.S. ET | Jun 2



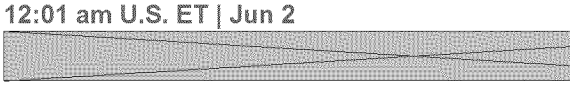
Hyundai World Cup ads spotlight sports nut, bevy of births

12:15 pm U.S. ET | Jun 3



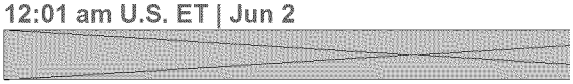
Is Superleggera Vision roadster a new kind of Mini in the making?

12:01 am U.S. ET | Jun 2



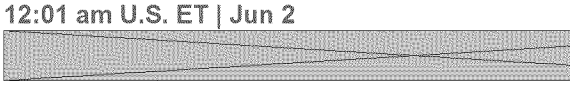
How to contain aluminum dust?

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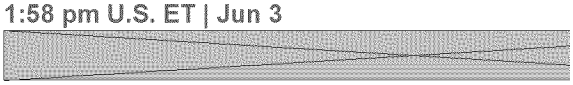
Jaguar Land Rover marks 100th dual-brand store

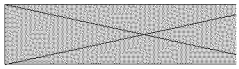
12:01 am U.S. ET | Jun 2



Iron castings supplier Grede completes sale to private equity firm

1:58 pm U.S. ET | Jun 3

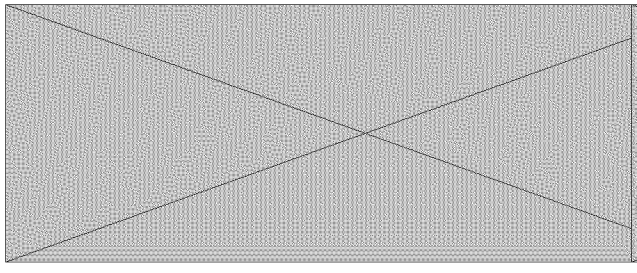


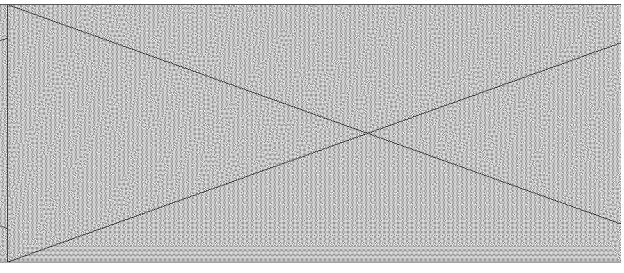


UPCOMING WEBINARS

» June 18 - Third-Party Sites and Online F&I

» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



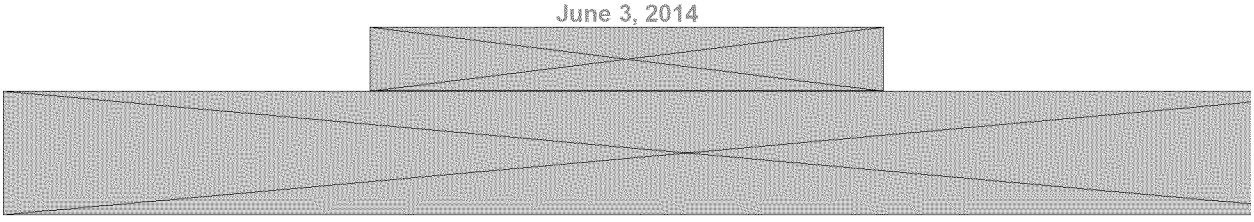


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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 6/3/2014 10:27:07 PM
Subject: U.S. SALES REPORT: May sales soar, gains galore as stars align

June 3, 2014



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Sales soar, gains galore as May stars

4:45 pm U.S. ET | Jun 3

Sometimes the stars align. The weather held, the calendar added both an extra selling day and a fifth weekend, lenders relaxed a bit, factories sweetened the pot. And May U.S. auto sales jumped 11 percent to 1.6 million units. ...
» READ

Chevy, cars, fleet help GM overcome recall crisis

1:33 pm U.S. ET | Jun 3

General Motors' U.S. sales rose 13 percent in May on a strong performance from its mainstay Chevrolet brand, a sign that consumers are looking past GM's unfolding recall crisis. ... » READ

Nissan Division rings up record with 18% surge

3:21 pm U.S. ET | Jun 3

Nissan Division reported sales of 125,558 cars and trucks for May, an 18 percent increase over May 2013. The new level represents a record for May volume at Nissan. ...
» READ

SEGMENT SPOTLIGHT

Large cars, after brief comeback, lose traction again

4:24 pm U.S. ET | Jun 3

The large car's comeback appears over. After a solid rise in 2013, U.S. sales of nonluxury big sedans dropped 5 percent through May, while car sales were flat and total light-vehicle sales jumped 5 percent. ... » READ

ON THE BLOGS

JESSE SNYDER

Ya gotta love those new models

» READ

Record monthly Jeep sales push Chrysler Group up 17%

12:54 pm U.S. ET | Jun 3

Ford advances 3% on Fusion, Escape records

3:17 pm U.S. ET | Jun 3

Crossovers fuel gains for smaller Asian brands

3:24 pm U.S. ET | Jun 3

Lincoln's MKC trickles into showrooms

4:15 pm U.S. ET | Jun 3

BMW tops Mercedes in May as cheaper luxury models woo buyers

5:07 pm U.S. ET | Jun 3

Ford edges Chrysler as Canada posts all-time monthly sales record

3:00 pm U.S. ET | Jun 3

Auto sales rise 11% as 'everything came together'

8:15 am U.S. ET | Jun 3

WINNERS AND LOSERS

% change in sales among brands

	Winners	May	Winners	5 mos.	Losers	May	Losers	5 mos.
1	Maserati	406.2%	Maserati	357.2%	Chrysler Division	-22.3%	Mini	-27.2%
2	Jeep	58.0%	Jeep	49.2%	Volvo	-20.8%	Chrysler Division	-14.3%
3	Mitsubishi	54.2%	Mitsubishi	33.7%	Smart	-15.8%	Volkswagen division	-11.5%
4	Infiniti	31.4%	Ram	24.3%	Volkswagen division	-15.4%	Volvo	-9.9%
5	Land Rover	27.6%	Lincoln	20.9%	Jaguar	-9.1%	Scion	-9.2%

Top Selling Light Vehicles

		May		5 mos.
1	Ford F series	68,520	Ford F series	305,2
2	Toyota	49,584	Chevrolet	197,1

	Camry		Silverado	
3	Chevrolet Silverado	46,648	Toyota Camry	181,8
4	Honda Accord	39,637	Ram	170,7
5	Ram	37,131	Honda Accord	152,9
6	Toyota Corolla/ Matrix	36,611	Nissan Altima	150,3
7	Honda Civic	36,089	Toyota Corolla/ Matrix	143,4
8	Nissan Altima	36,053	Ford Fusion	137,8
9	Ford Fusion	33,881	Honda Civic	134,7
10	Honda CR-V	32,430	Honda CR-V	128,5

Top Selling Cars

		May		5 mos.
1	Toyota Camry	49,584	Toyota Camry	181,8
2	Honda Accord	39,637	Honda Accord	152,9
3	Toyota Corolla/ Matrix	36,611	Nissan Altima	150,3
4	Honda Civic	36,089	Toyota Corolla/ Matrix	143,4
5	Nissan Altima	36,053	Ford Fusion	137,8
6	Ford Fusion	33,881	Honda Civic	134,7
7	Chevrolet Cruze	32,393	Chevrolet Cruze	119,3
8	Toyota Prius	26,793	Hyundai Elantra	95,32
9	Ford Focus	23,683	Ford Focus	94,69
10	Nissan Sentra	21,932	Toyota Prius	88,45

Top Selling Light Trucks

		May		5 mos.
1	Ford F series	68,520	Ford F series	305,26
2	Chevrolet Silverado	46,648	Chevrolet Silverado	197,16
3	Ram	37,131	Ram	170,71
4	Honda CR-V	32,430	Honda CR-V	128,56
5	Ford Escape	31,896	Ford Escape	127,78

6	Toyota RAV4		Chevrolet Equinox	
7	Chevrolet Equinox	22,695	Toyota RAV4	95,363
8	Ford Explorer	22,623	Ford Explorer	87,170
9	Jeep Wrangler	19,235	Nissan Rogue	84,236
10	Nissan Rogue	18,722	GMC Sierra	77,785

Table sorted by year-to-date sales

	May 2014	May 2013	% change	5 mos. 2014	5 mos. 2013	% change
Buick	19,957	17,982	11%	92,069	82,759	11%
Cadillac	14,688	13,808	6%	68,176	69,750	-2%
Chevrolet	205,010	179,510	14%	839,341	821,674	2%
GMC	45,039	41,594	8%	188,821	181,320	4%
General Motors	**284,694**	**252,894**	**13%**	**1,188,407**	**1,155,503**	**3%**
Ford division	244,501	238,714	2%	1,006,710	1,024,000	-2%
Lincoln	8,845	7,305	21%	37,251	30,819	21%
Ford Motor Co.	**253,346**	**246,019**	**3%**	**1,043,961**	**1,054,819**	**-1%**
Lexus	26,921	22,229	21%	115,171	97,060	19%
Scion	6,181	6,586	-6%	26,024	28,660	-9%
Toyota Division	210,134	179,137	17%	822,698	787,836	4%
Toyota/Scion	*216,315*	*185,723*	17%	*848,722*	*816,496*	4%
Toyota Motor Sales	**243,236**	**207,952**	**17%**	**963,893**	**913,556**	**6%**
Chrysler Division	22,592	29,070	-22%	117,042	136,590	-14%
Dodge	57,923	56,407	3%	256,610	268,571	-5%
Ram	38,932	32,649	19%	179,095	144,127	24%
Dodge/Ram	*96,855*	*89,056*	*9%*	*435,705*	*412,698*	*6%*
Fiat	4,771	4,051	18%	20,494	17,562	17%
Jeep	70,203	44,419	58%	275,796	184,796	49%
Chrysler Group* **	**194,421**	**166,596**	**17%**	**849,037**	**751,646**	**13%**
Acura	14,675	14,364	2%	66,745	63,216	6%
Honda Division	137,928	125,649	10%	543,668	545,447	0%
American Honda Motor Co.	**152,603**	**140,013**	**9%**	**610,413**	**608,663**	**0%**
Infiniti	10,376	7,899	31%	50,767	43,119	18%
Nissan Division	125,558	106,558	18%	544,067	477,466	14%
Nissan North America	**135,934**	**114,457**	**19%**	**594,834**	**520,585**	**14%**
Hyundai division	70,907	68,358	4%	297,027	296,003	0%
Kia	60,087	52,327	15%	246,769	226,815	9%
Hyundai-Kia	**130,994**	**120,685**	**9%**	**543,796**	**522,818**	**4%**
Audi	16,601	13,228	26%	67,482	60,571	11%
Bentley	233	189	23%	1,092	970	13%
Lamborghini*	59	57	4%	295	285	4%
Porsche	4,609	3,928	17%	18,817	17,609	7%
VW division	32,163	38,013	-15%	150,317	169,835	-12%
VW Group Of America	**53,665**	**55,415**	**-3%**	**238,003**	**249,270**	**-5%**
Subaru	**44,170**	**39,892**	**11%**	**196,641**	**165,362**	**19%**
BMW division	29,602	25,230	17%	127,181	113,357	12%
Mini	5,729	5,944	-4%	18,776	25,785	-27%
Rolls-Royce*	75	71	6%	375	355	6%
BMW Group	**35,406**	**31,245**	**13%**	**146,332**	**139,497**	**5%**

Maybach						
Mercedes-Benz	28,881	26,543	9%	134,400	125,058	8%
Smart USA	689	818	-16%	3,974	3,678	8%
Daimler AG	29,570	27,361	8%	138,374	128,742	8%
Mazda	29,731	24,270	23%	130,223	122,446	6%
Mitsubishi	7,269	4,715	54%	33,651	25,172	34%
Jaguar	1,304	1,435	-9%	7,054	6,161	15%
Land Rover	4,536	3,554	28%	22,148	19,516	14%
Jaguar Land Rover N.A.	5,840	4,989	17%	29,202	25,677	14%
Volvo Cars N.A.	5,014	6,329	-21%	23,347	25,900	-10%
Tesla*	2,350	2,488	-6%	10,880	10,498	4%
Maserati	1,144	226	406%	4,476	979	357%
Suzuki	-	-	-	-	5,946	-100%
Other**	291	284	3%	1,455	1,420	3%
U.S. LIGHT VEHICLE	1,609,678	1,445,830	11%	6,746,925	6,428,499	5%

*Estimate
**Includes estimates for Aston Martin, Ferrari and Lotus
***Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.

Highlights

Mfgr. highest volume - May	GM	284,694	Mfgr. highest volume - 5 mos.	GM	1,188,407
Mfgr. gained the most volume - May	Toyota Motor Sales	35,284	Mfgr. gained the most volume - 5 mos.	Chrysler Group	97,391
Mfgr. lost the most volume - May	VW Group	(1,750)	Mfgr. lost the most volume - 5 mos.	VW Group	(11,267)
Mfgr. highest % increase - May	Maserati	406%	Mfgr. highest % increase - 5 mos.	Maserati	357%
Mfgr. biggest % drop - May	Volvo	-21%	Mfgr. biggest % drop - 5 mos.	Volvo	-10%

Brand highest volume - May	Ford Motor Co.	244,501	Brand highest volume - 5 mos.	Ford	1,006,710
Brand gained the most volume - May	Toyota	30,997	Brand gained the most volume - 5 mos.	Jeep	91,000
Brand lost the most volume - May	Chrysler	(6,478)	Brand lost the most volume - 5 mos.	Chrysler	(19,548)
Brand highest % increase - May	Maserati	406%	Brand highest % increase - 5 mos.	Maserati	357%
Brand biggest % drop - May	Chrysler	-22%	Brand biggest % drop - 5 mos.	Mini	-27%

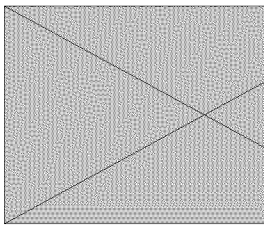
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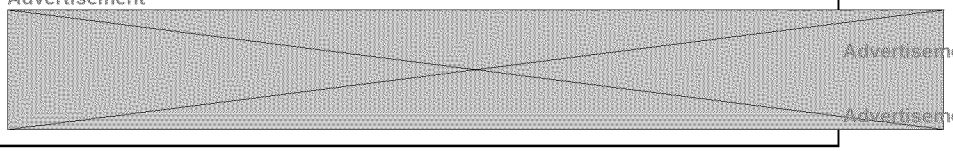
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June 4, 2014



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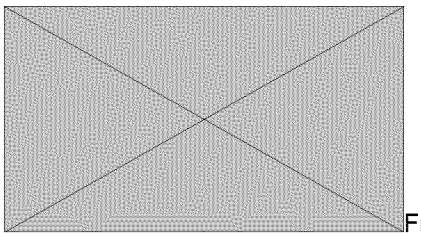


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First Ride: Mustang 4-Cyl. Convincing Enough



From the passenger seat, the all-new 2.3L EcoBoost propels the car with gusto through three laps on a short handling track about the size of a football field in the Charlotte Motor Speedway parking lot.

FULL ARTICLE

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Optimize performance and product quality, while limiting asset downtime – with analytics.
What if you could confidently predict what is likely to happen next on your production line? What if you could optimize your manufacturing processes and improve product quality, all while lowering costs? Join us on 6/25 and hear how Daimler and IBM are using predictive maintenance to do just this.

Gallery: A Spin in New Mustang

It was only five minutes in the passenger seat, but that was enough time to draw some first impressions about the all-new '15 Ford Mustang with its 2.3L EcoBoost 4-cyl. engine, independent rear suspension and upgraded

Digital Magazine

- Read the Current Issue

WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

interior.

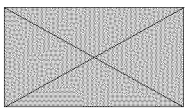
Video: Riding in All-New '15 Ford Mustang

Ford's Jamie Cullen takes us for a short ride in the new '15 Ford Mustang equipped with the 2.3L EcoBoost 4-cyl. engine.

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Design Tips-12 Essentials for Moldability
Ten years ago, we began publishing Protomold Design Tips to help product developers create better injection-molded plastic parts. We've covered materials, texture, draft, sink and many other design considerations. More than 100 tips later, we remain steadfast in our effort to continue informing designers and engineers in all areas of injection-molded part design. As a resource, we've gathered some of our most useful manufacturing advice from the past decade in a collection of essential tips.

Autoline Daily

 VW to Triple SUV Lineup; Global Car Sales Slow; Peek Into the 2014 Gumball 3000

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The race to 54.5 mpg by 2025 is on.

ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

Once-Exclusive Brembo Adapts to High Volume

Recognized for producing brakes for high-performance cars, Italy-based Brembo has expanded its product strategy to include high-volume mainstream vehicles. But BMW, Mercedes and the new Chevrolet Corvette remain core customers.

FULL ARTICLE

Gallery: Brembo Brake Plant Expanding

Brembo stepped up its presence in the market for foundation brakes as one of the top players, Robert Bosch, was exiting because profit margins are thin, compounded at the time by declining volumes.

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Supply Chain Management: What You Don't See Can Hurt You

The Japanese earthquake and subsequent tsunami of May 2011 underscored the fragility of the worldwide automotive supply chain. The disasters temporarily closed plants that produced 17 of the top 20 models of Japanese vehicles sold in the U.S. and prompted General Motors to close a plant in Louisiana and a Peugeot plant in Europe, according to a Congressional Research Service study. Learn More

Ford Concept Car Takes Lightweighting to Extreme

Ford Lightweight Concept Car 25% lighter than the '13 Ford Fusion it is based upon.

FULL ARTICLE

Mini Unveils Superleggera Vision Concept

The concept roadster was developed by Mini and Italian design house Carrozzeria Touring Superleggera.

FULL ARTICLE

Advertisement

Improve passenger compartment and seat design with the improved SAE International H-Point Machine The HMP-II defines and locates the standard seating reference point and offers additional leg, shoe, and pedal reference points; lumbar support measurement; easier installation over the SAE HPM-I. Ideal for advanced design/research applications. See video here.

GM India Looks Overseas to Shore Up Slumping Sales

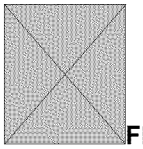
The model chosen for export is the Chevrolet Beat, a small hatchback considered well-built, affordable and well-suited to city traffic.

FULL ARTICLE

How Dave Power Became 'Voice of the Customer'

Japanese Automakers Expect Gains to

Advertisement

 **FINAL INSPECTION BLOG**
In launching his firm, Power came up with a unique idea: Talk directly to customers about their problems, likes and complaints.

FULL ARTICLE

Continue in Fiscal 2014

Lesser players Suzuki and Subaru manufacturer Fuji Heavy Industries posted both record earnings and sales in fiscal 2013.

FULL ARTICLE

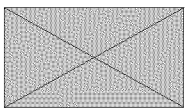
Gallery: 10 Best Interiors on Display at WardsAuto Interiors Conference

The Ward's 10 Best Interiors winners were displayed prominently at the WardsAuto Interiors Conference May 21 in Dearborn. Attendees had ample opportunities to climb in the seats and experience the interiors for themselves. Vote for your favorite in our poll.

WardsAuto Poll

Which is your favorite from among this year's Ward's 10 Best Interiors winners? Check out the gallery of cars and vote in our latest poll.

VideoWire

 Ghosn: Autonomous Cars by 2018; Chrysler Sales Top Expectations; BMW to Cut Costs

King's UAW Legacy Includes International Spotlight, Improved Industry Relations

"I have an upbeat view," King says, adding that unions around the world understand the auto industry is a global industry and workers need to stick together to ensure they are treated fairly.

FULL ARTICLE

Video: WardsAuto Outlook – Strong Q2 Results, Good Expectations for Rest of '14

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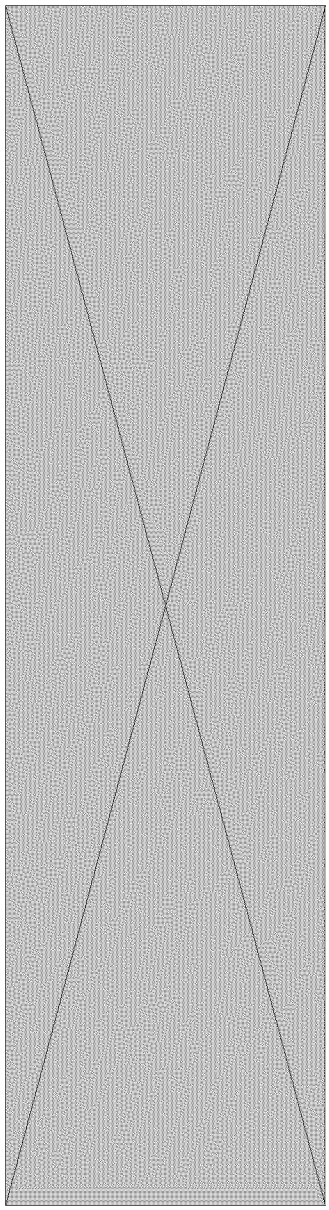
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WardsAuto analysts update their forecasts for the second quarter.

GM Releases Tally of Year-to-Date Recalls

The document marks an unusual step, but a spokesman says given the recall activity this year GM felt compelled to publish an accurate list it will update regularly.

FULL ARTICLE



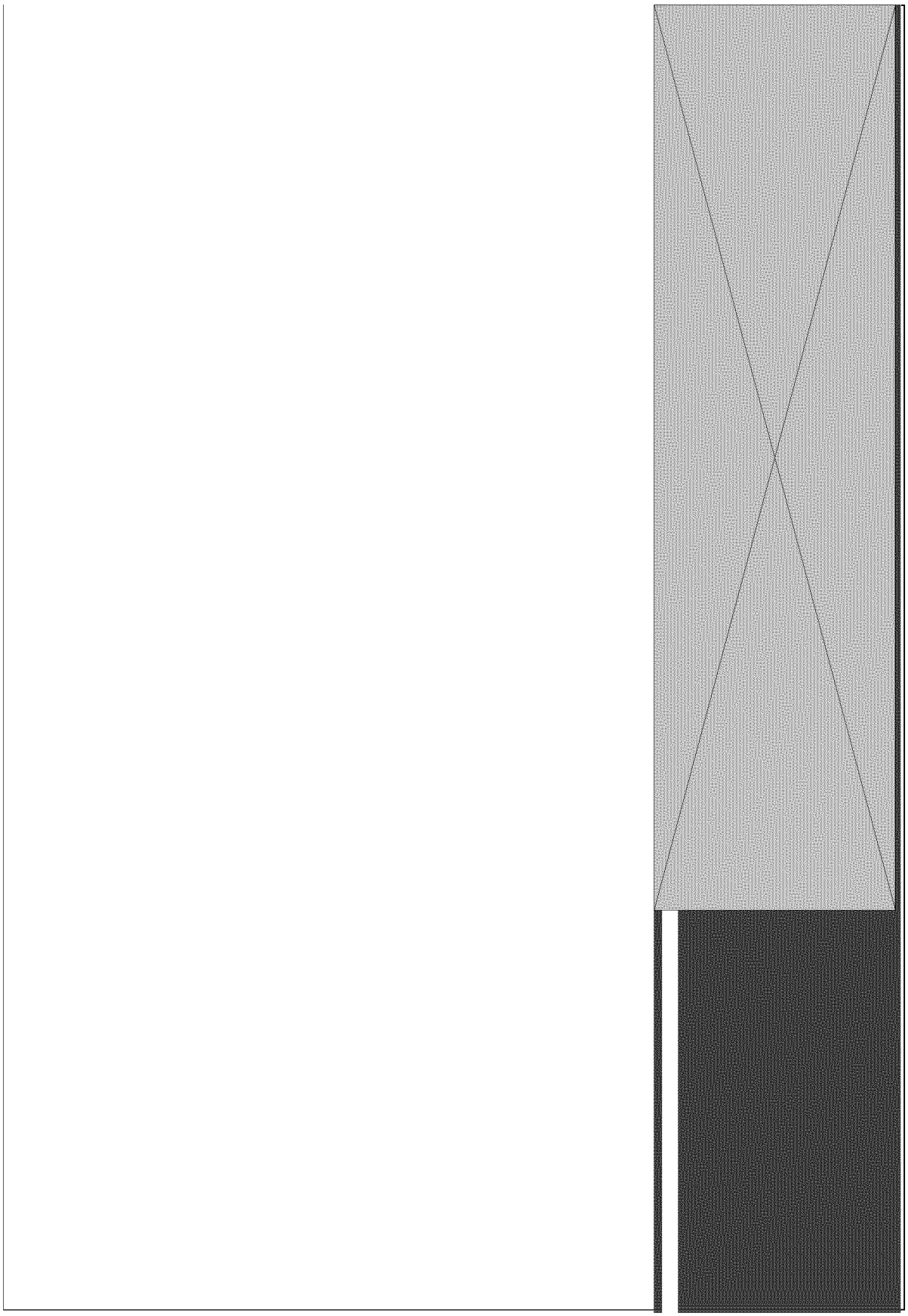
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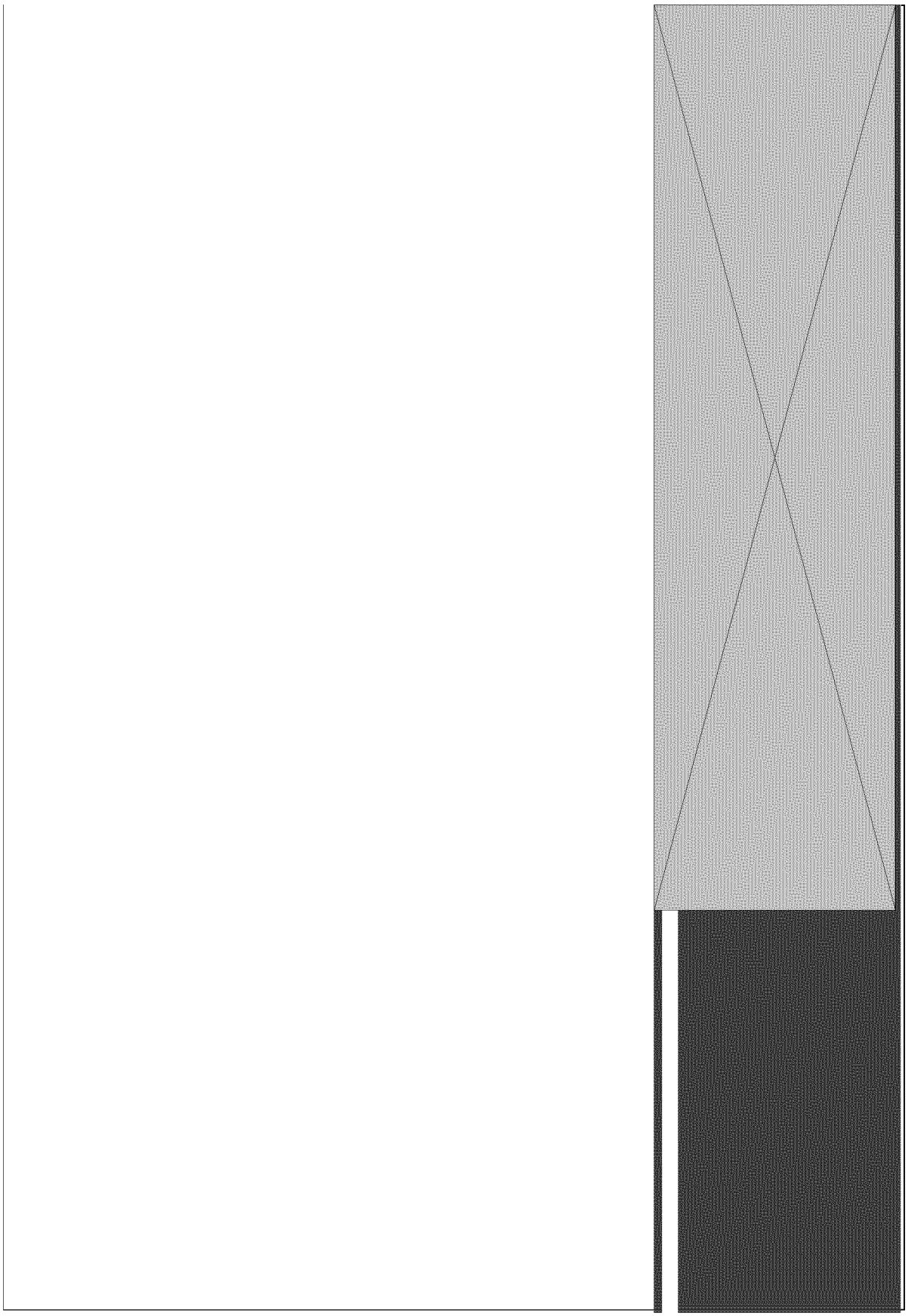
Digital Magazine

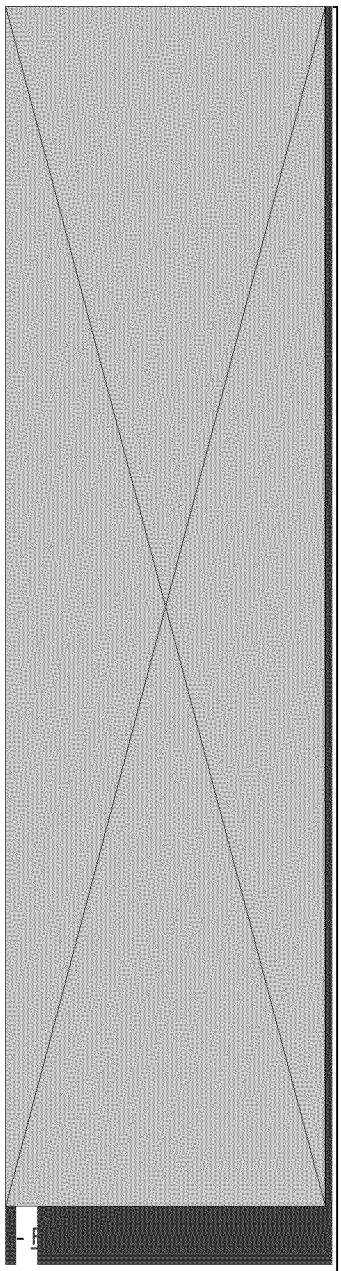
- Read the Current Issue

WHITEPAPER

Bringing new vehicles to

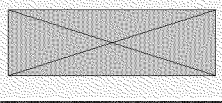
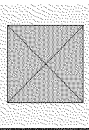
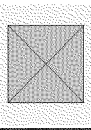
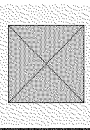
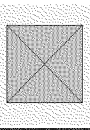
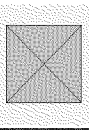


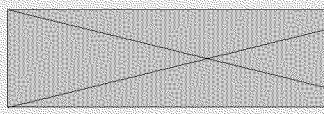




market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper Now!



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To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 6/4/2014 10:41:43 AM
Subject: 5-cycle Calculation Method and Flex Fueled Test Groups

Hi Dave;

Is it possible to enter fuel economy testing using two different calculation methods for flexible fueled models? For example; in Verify there are three FE label calculation approaches for gasoline or diesel models, the other choices are related to BEV and PHEV, but this choice is only presented once. When we do a FFV label we have both a gasoline calculation and an E85 calculation per index. It would seem to me that this would not allow the use of a 5-cycle approach for gasoline and a derived 5-cycle approach for E85 within the same index. Is that the intent, or am I missing something?

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Wed 6/4/2014 4:29:13 PM
Subject: Test Group FVGAJ03.0AUD

Bill, I finished reviewing the Audi certs. For the Test Group FVGAJ03.0AUD / Evaporative FVGAR0140AAD, on page 4 of the Appilcation pdf it shows the evap test vehicle as D3UF-Q5A / 1. It should be config 0 not 1. It appears to be correct everywhere else so I will approve the certificates now and you can revise the pdf

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Ott, William[ott.william@epa.gov]
From: Snyder, Jim
Sent: Wed 6/4/2014 5:46:53 PM
Subject: FW: EPA PHEV / BEV Questions
PHEV_BEV_Question_EPA.pdf

Will, I mentioned that VW had some questions about PHEVs and BEVs. I noticed this later note that they did talk to Rob and were revising their list of questions. I haven't heard back since that but here is their initial handout.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Ex. 7
Sent: Friday, May 23, 2014 7:52 AM
To: Snyder, Jim
Cc: Ex. 7
Subject: FW: EPA PHEV / BEV Questions

Hello Jim,

This might circle back to you. I did not get a response back from Linc and Dave, so we would still like to set up a meeting sometime soon to discuss our open questions. We did get some clarifying information from Rob French last week and my colleagues in Germany are revising the presentation accordingly. We will get back to you when you are back in the office next week. I will be traveling next week but I expect you may get contact from one of us.

Thank you and best regards,

Ex. 7

From: Ex. 7
Sent: Thursday, May 15, 2014 9:11 AM
To: wehrly.linc@epa.gov; 'wright.davida@epa.gov'
Subject: FW: EPA PHEV / BEV Questions

Hello Linc and David,

I just sent this email to Jim asking for a meeting and attaching some PHEV and BEV certification questions. Is it possible to discuss these points next week? Let me know if you have time available and I can set up a meeting.

Thank you and best regards,

Ex. 7

From: Ex. 7
Sent: Thursday, May 15, 2014 8:47 AM
To: Snyder, Jim (Snyder.Jim@epa.gov)
Subject: FW: EPA PHEV / BEV Questions

Hello Jim,

The VW Group would like to schedule a meeting (or conference call) with EPA staff and VW certification staff to discuss PHEV and BEV certification. There are still some questions we have regarding PHEV calculations and testing we would like to discuss with you. In advance of

the meeting please see the attached presentation with our open points or questions.

Is there a time that works best for you? My proposal is to have the meeting early next week if that is possible for EPA staff. I understand you may want to discuss our questions internally first.

Thank you and best regards,

Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Wed 6/4/2014 5:47:27 PM
Subject: RE: Test Group FVGAJ03.0AUD

Thanks I will have a look.

Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, June 04, 2014 12:29 PM
To: Rodgers, William (EEO)
Subject: Test Group FVGAJ03.0AUD

Bill, I finished reviewing the Audi certs. For the Test Group FVGAJ03.0AUD / Evaporative FVGAR0140AAD, on page 4 of the Appilcation pdf it shows the evap test vehicle as D3UF-Q5A / 1. It should be config 0 not 1. It appears to be correct everywhere else so I will approve the certificates now and you can revise the pdf

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Wed 6/4/2014 6:48:57 PM
Subject: RE: 5-cycle Calculation Method and Flex Fueled Test Groups

Richard,

Ethanol FE label calcs are in 600.210-08(a)(3).

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Wednesday, June 04, 2014 6:42 AM
To: Good, David
Subject: 5-cycle Calculation Method and Flex Fueled Test Groups

Hi Dave;

Is it possible to enter fuel economy testing using two different calculation methods for flexible fueled models? For example; in Verify there are three FE label calculation approaches for gasoline or diesel models, the other choices are related to BEV and PHEV, but this choice is only presented once. When we do a FFV label we have both a gasoline calculation and an E85 calculation per index. It would seem to me that this would not allow the use of a 5-cycle approach for gasoline and a derived 5-cycle approach for E85 within the same index. Is that the intent, or am I missing something?

Thanks,

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Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Thur 6/5/2014 3:14:13 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of June 4, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-6-4-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of June 4, 2014

Attached are the data in Verify as of June 4, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on June 9, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen Gr	Audi	A3	VGA 7	1.8	4
		2015 Volkswagen Gr	Audi	A3 Cabriolet	VGA 6	1.8	4
		2015 Volkswagen Gr	Audi	A3 Cabriolet quattro	VGA 5	2.0	4
		2015 Volkswagen Gr	Audi	A3 quattro	VGA 4	2.0	4
		2015 Volkswagen Gr	Audi	A4	VGA 46	2.0	4
		2015 Volkswagen Gr	Audi	A4 quattro	VGA 64	2.0	4
		2015 Volkswagen Gr	Audi	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen Gr	Audi	A5 Cabriolet quattro	VGA 66	2.0	4
		2015 Volkswagen Gr	Audi	A5 quattro	VGA 65	2.0	4
		2015 Volkswagen Gr	Audi	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen Gr	Audi	A6	VGA 47	2.0	4
		2015 Volkswagen Gr	Audi	A6 quattro	VGA 48	2.0	4
Diesel;		2015 Volkswagen Gr	Audi	A6 quattro	VGA 17	3.0	6
Diesel;		2015 Volkswagen Gr	Audi	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen Gr	Audi	A8	VGA 40	3.0	6
		2015 Volkswagen Gr	Audi	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen Gr	Audi	A8L	VGA 15	3.0	6
		2015 Volkswagen Gr	Audi	A8L	VGA 41	3.0	6
		2015 Volkswagen Gr	Audi	A8L	VGA 10	4.0	8
		2015 Volkswagen Gr	Audi	A8L	VGA 14	6.3	12
		2015 Volkswagen Gr	Audi	allroad quattro	VGA 68	2.0	4
Error in RoY		2015 Volkswage	Audi	Q3	VGA 62	2.0	4
		2015 Volkswagen Gr	Audi	Q3 quattro	VGA 37	2.0	4
		2015 Volkswagen Gr	Audi	Q5	VGA 67	2.0	4
Diesel;		2015 Volkswagen Gr	Audi	Q5	VGA 16	3.0	6
Hybrid;		2015 Volkswagen Gr	Audi	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen Gr	Audi	Q7	VGA 12	3.0	6
		2015 Volkswagen Gr	Audi	Q7	VGA 51	3.0	6
		2015 Volkswagen Gr	Audi	R8	VGA 27	4.2	8
		2015 Volkswagen Gr	Audi	R8	VGA 29	4.2	8
		2015 Volkswagen Gr	Audi	R8	VGA 35	5.2	10
		2015 Volkswagen Gr	Audi	R8	VGA 33	5.2	10
		2015 Volkswagen Gr	Audi	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen Gr	Audi	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen Gr	Audi	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen Gr	Audi	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen Gr	Audi	RS5	VGA 30	4.2	8
		2015 Volkswagen Gr	Audi	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen Gr	Audi	RS7	VGA 21	4.0	8
		2015 Volkswagen Gr	Audi	S3	VGA 42	2.0	4
		2015 Volkswagen Gr	Audi	S6	VGA 20	4.0	8
		2015 Volkswagen Gr	Audi	S7	VGA 19	4.0	8
		2015 Volkswagen Gr	Audi	S8	VGA 9	4.0	8
		2015 Volkswagen Gr	Audi	TT Coupe quattro	VGA 2	2.0	4
		2015 Volkswagen Gr	Audi	TT Roadster quattro	VGA 3	2.0	4
		2015 Volkswagen Gr	Bentley	Continental GT	VGA 24	4.0	8
		2015 Volkswagen Gr	Bentley	Continental GT	VGA 43	6.0	12
		2015 Volkswagen Gr	Bentley	Continental GT Convertible	VGA 22	4.0	8
		2015 Volkswagen Gr	Bentley	Continental GT Convertible	VGA 45	6.0	12
		2015 Volkswagen Gr	Bentley	Flying Spur	VGA 23	4.0	8
		2015 Volkswagen Gr	Bentley	Flying Spur	VGA 44	6.0	12
		2015 Volkswagen Gr	Bentley	Mulsanne	VGA 61	6.8	8

	2015	Volkswagen	Bugatti	Veyron	VGA	60	8.0	16
	2015	Volkswagen	Lamborghini	Aventador	VGA	52	6.5	12
	2015	Volkswagen	Lamborghini	Aventador Roadster	VGA	53	6.5	12
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	2015	Volkswagen	Lamborghini	Huracan	VGA	25	5.2	10
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	2015	Volkswagen	Volkswagen	CC	VGA	59	2.0	4
	2015	Volkswagen	Volkswagen	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen	Volkswagen	Eos	VGA	36	2.0	4
	2015	Volkswagen	Volkswagen	GTI	VGA	1	2.0	4
	2015	Volkswagen	Volkswagen	GTI	VGA	8	2.0	4
	2015	Volkswagen	Volkswagen	Passat	VGA	55	3.6	6
	2015	Volkswagen	Volkswagen	Tiguan	VGA	39	2.0	4
	2015	Volkswagen	Volkswagen	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Touareg	VGA	13	3.0	6
	2015	Volkswagen	Volkswagen	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	20	27	23				25.2000	37.3000	29.5075
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995
Auto(AM-S6)	22	31	26				28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26				28.3669	42.1911	33.2728
Auto(S8)	15	25	19				19.1000	33.5000	23.6806
Auto(S8)	12	21	15				15.4000	28.3000	19.3741
Auto(S8)	14	24	17				17.3000	31.8000	21.7662
Auto(S8)	12	20	15				14.4000	26.7000	18.1658
Auto(S8)	14	24	17				17.3000	31.8000	21.7662
Auto(S8)	12	20	15				14.4000	26.7000	18.1658
Auto(S8)	11	18	13				12.9000	21.8000	15.8033

Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable			(e.g. C
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable			(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8		
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8		
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8		
19.9584	26.6824	22.5112		TC	Turbocharged	SA	Semi-Automatic	8		
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Auto	6		
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6		
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8		
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8		
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8		
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8		
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic	8		
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7		(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7		(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8		
22.3665	31.1759	25.6242		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
22.3665	31.1759	25.6242		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
15.2087	25.3816	18.5553		TC	Turbocharged	SA	Semi-Automatic	8		
12.4737	21.0866	15.2827	G	TC	Turbocharged	SA	Semi-Automatic	8		
13.8190	23.8488	17.0447	G	TC	Turbocharged	SA	Semi-Automatic	8		
12.0228	20.0478	14.6643	G	TC	Turbocharged	SA	Semi-Automatic	8		
13.8190	23.8488	17.0447	G	TC	Turbocharged	SA	Semi-Automatic	8		
12.0228	20.0478	14.6643	G	TC	Turbocharged	SA	Semi-Automatic	8		
10.5402	17.7129	12.8889	G	TC	Turbocharged	SA	Semi-Automatic	8		

8.4232	14.7698	10.4424	G	TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G	NA	Naturally Aspirated	AMS	Automated	7
9.7957	16.2453	11.9264	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G	NA	Naturally Aspirated	AMS	Automated	7
14.0224	20.0427	16.2140	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
21.8993	30.8310	25.1821		TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378		TC	Turbocharged	MD	Manual	6
16.9415	25.2190	19.8774		NA	Naturally Aspirated	SA	Semi-Automatic	6
21.7634	30.1121	24.8658		TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.6434	32.6158	27.6891		TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070		TC	Turbocharged	MD	Manual	6
19.7174	27.8048	22.6868		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161		TC	Turbocharged	SA	Semi-Automatic	6
20.3807	25.8019	22.5089		TC	Turbocharged	SA	Semi-Automatic	6
19.6490	28.9961	22.9829		TC	Turbocharged	SA	Semi-Automatic	8
17.0411	22.7325	19.2048		NA	Naturally Aspirated	SA	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Dr	FVGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Dr	FVGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV02.	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV02.	0APA	15		GP	Gasoline (Premium
MT with pad	N	F	2-Wheel Dr	FVGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ02.	0AUF	85	406	GP	Gasoline (Premium
N	N	A	All Wheel Dr	FVGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ02.	0AUF	85	406	GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ02.	0AUF	85	406	GP	Gasoline (Premium
N	N	A	All Wheel Dr	FVGAV02.	0AUB	15		GP	Gasoline (Premium
MT with pad	N	F	2-Wheel Dr	FVGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	FVGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	FVGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV06.	3VUM	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ02.	0AUF	85	389	GP	Gasoline (Premium
Y	N	F	2-Wheel D	FVGAV02.		15		GP	Gasoline (I
Y	N	A	All Wheel Dr	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ02.	0AUF	85	455	GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	FVGAT02.	0AUH	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAT03.	0NU3		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Dr	FVGAT03.	0ALT	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	FVGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	FVGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	FVGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel Dr	FVGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV06.	0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV06.	0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Dr	FVGAV06.	0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Dr	FVGAV06.	8ELP	15		GP	Gasoline (Premium

Y	N	A	All Wheel Drive	1VWGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	1VWGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	1VWGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	1VWGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	1VWGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	1VWGAJ02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	1VWGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	1VWGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	1VWGAJ02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	1VWGAJ02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	1VWGAJ02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	1VWGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	1VWGAJ02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	1VWGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	1VWGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	1VWGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	Unleaded Recommended)	Not exempt				86	12		
MPG	Unleaded Recommended)	Not exempt		79	10				
MPG	Unleaded Recommended)	Not exempt		79	10				
MPG	Unleaded Recommended)	Not exempt				86	10		
MPG	Unleaded Recommended)	Not exempt				91	12		
MPG	Unleaded Recommended)	Not exempt				91	12		
MPG	Unleaded Recommended)	Not exempt				91	12		
MPG	Unleaded Recommended)	Not exempt		81	10				
MPG	Unleaded Recommended)	Not exempt		84	12				
MPG	Unleaded Recommended)	Not exempt		84	12				
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt						94	25
MPG	Unleaded Recommended)	Not exempt				100	15		
MPG	Unleaded Recommended)	Not exempt				100	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				90	28		
MPG	Unleaded Recommended)	Not exempt						84	17
MPG	Unleaded Recommended)	Not exempt						84	17
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt		84	13				
MPG	Unleaded Recommended)	Not exempt		81	10				
MPG	Unleaded Recommended)	Not exempt						94	25
MPG	Unleaded Recommended)	Not exempt				86	10		
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt						94	25
MPG	Unleaded Recommended)	Not exempt				100	15		
MPG	Unleaded Recommended)	Not exempt		74	13				
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt		89	11				
MPG	Unleaded Recommended)	Not exempt		89	11				
MPG	Unleaded Recommended)	Not exempt		86	7				
MPG	Unleaded Recommended)	Not exempt		86	7				
MPG	Unleaded Recommended)	Not exempt		102	13				
MPG	Unleaded Recommended)	Not exempt		102	13				
MPG	Unleaded Recommended)	Not exempt				101	11		

MRG	miles per gallon	Not exempt								
Unleaded Required)										
MRG	miles per gallon	Not exempt								
Unleaded Required)										
MRG	miles per gallon	Not exempt								
Unleaded Required)										
MRG	miles per gallon	Not exempt								
Unleaded Required)										
MRG	miles per gallon	Not exempt								
Unleaded Recommended)										
MRG	miles per gallon	Not exempt	94	13						
Unleaded Recommended)										
MRG	miles per gallon	Not exempt	94	13						
Unleaded Recommended)										
MRG	miles per gallon	Not exempt	94	13						
Unleaded Recommended)										
MRG	miles per gallon	Not exempt	77	11						
Unleaded Recommended)										
MRG	miles per gallon	Not exempt							93	16
Unleaded Recommended)										
MRG	miles per gallon	Not exempt							93	16
Unleaded Recommended)										
MRG	miles per gallon	Not exempt			102	16				
Unleaded Recommended)										
MRG	miles per gallon	Truck								
Unleaded Recommended)										
MRG	miles per gallon	Truck								
Unleaded Recommended)										
MRG	miles per gallon	Truck								
Ultra (15 ppm, maximum)										
MRG	miles per gallon	Truck								
Unleaded Recommended)										

Annual Fu	EPA Calcu	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2400	2400	CO2 corrections	14	21	16				17.8377
2200	2200								
2400	2400		14	21	16				17.8377
2400	2400	CO2 corrections	14	21	16				17.8377
2200	2200								
2050	2050								
2500	2500								
1950	1950								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2500	2500		14	18	15				17.1
2500	2500	Corrected CO2 typos							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o							
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o							
3000	3000	release date change to March							
3800	3800		9	15	11				10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March							
3800	3800		9	15	11				10.5
3350	3350	release date change to March							
3800	3800		9	15	11				10.5
4400	4400								

5700	5700	eng code correction
4400	4400	
4750	4750	
4400	4400	
3550	3550	Release date change
2300	2300	
2300	2300	
2850	2850	
2300	2300	
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV
2050	2050	
2500	2500	
2500	2500	
2500	2500	
2450	2450	corrected fuel economy rating to 5
3000	3000	

Hwy2 UnadComb2 UrCnty2 UnrHwy2 UnrCmb2 Unr Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
SB.				
on changed to #1 for 1.8L engine code CNSB				
L engine code CNTC.				
ed to #2 for 2.0L engine code CNTC				
28.7257 21.5058 14.106 20.5015 16.4096 270	E	Ethanol (E85)	MPG	miles per gallon
28.7257 21.5058 14.106 20.5015 16.4096 270	E	Ethanol (E85)	MPG	miles per gallon
28.7257 21.5058 14.106 20.5015 16.4096 270	E	Ethanol (E85)	MPG	miles per gallon
25.6 20.1038 13.5432 18.3117 15.3409 254	E	Ethanol (E85)	MPG	miles per gallon
27.1 20.7407 13.7947 19.3602 15.8444 317	E	Ethanol (E85)	MPG	miles per gallon
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f				
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f				
20.8 13.5107 8.8115 15.1054 10.8449 262	E	Ethanol (E85)	MPG	miles per gallon
20.5 13.4531 8.6127 14.7094 10.5874 262	E	Ethanol (E85)	MPG	miles per gallon
20.5 13.4531 8.6127 14.7094 10.5874 262	E	Ethanol (E85)	MPG	miles per gallon

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
2900	439	302	378	2900	SIDI; FFV;	2	24	Compact Cars
				SIDI;	2	24		Compact Cars
2900	439	302	378	2900	SIDI; FFV;	2	23	Subcompact Cars
2900	439	302	378	2900	SIDI; FFV;	2	23	Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
3100	458	338	404	3100	SIDI; FFV;	2	27	Small Station Wag
				SIDI;	2	24		Compact C
				SIDI;	2	24		Compact Cars
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
or engine code CDMA and all TT models.				SIDI;	2	23		Subcompact Cars
or engine code CDMA and all TT models.				SIDI;	2	21		Two Seaters
				SIDI;	2	24		Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
				SIDI;	2	23		Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
				SIDI;	2	25		Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
					1	15		Midsize Cars

	2	21	Two Seaters
	2	21	Two Seate
	2	21	Two Seaters
	2	21	Two Seate
SIDI & PFI;	2	21	Two Seaters
SIDI;	2	24	Compact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	23	Subcompact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	24	Compact Cars
SIDI;	2	25	Midsize Cars
SIDI;	2	230	Small SUV 2WD
SIDI;	2	231	Small SUV 4WD
	2	233	Standard SUV 4W
SIDI;	2	233	Standard SUV 4W

SC Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset ID	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	[illegible]	2/25/2014	16011	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	16013	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	16012	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	1/15/2014	16010	[redacted]	N	N		
car	Derived 5-cycle label	[illegible]	6/9/2014	15670	[redacted]	N	N		
car	Derived 5-cycle label	[illegible]	6/9/2014	16031	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15675	[redacted]	N	N		
car	Derived 5-cycle label	[illegible]	6/9/2014	16033	[redacted]	N	N		
car	Derived 5-cycle label	[illegible]	6/9/2014	16032	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15676	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15673	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15674	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/10/2014	15458	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/10/2014	15459	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15647	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15385	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15456	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15648	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15386	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15442	[redacted]	N	N		
cars	Derived 5-cycle label	[illegible]	6/9/2014	16035	[redacted]	N	N		
car	Derived 5-cycle label	[illegible]	8/4/2014	15998	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	8/4/2014	15650	[redacted]	N	N		
	Derived 5-cycle label	[illegible]	6/9/2014	16034	[redacted]	N	N		
	Vehicle Specific 5-cycle	[illegible]	6/10/2014	15460	[redacted]	N	N		
	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15999	[redacted]	N	N		
D	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15408	[redacted]	N	N		
D	Derived 5-cycle label	[illegible]	6/9/2014	15711	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15493	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15497	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15601	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15598	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15492	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15496	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15600	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15597	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15589	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/9/2014	15590	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15577	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	8/4/2014	15651	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15576	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	6/12/2014	15575	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15400	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	1/15/2014	16014	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	1/15/2014	16015	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	3/28/2014	15558	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15654	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	3/28/2014	15557	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15661	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	3/28/2014	15559	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/15/2014	15659	[redacted]	N	N		
car	Vehicle Specific 5-cycle	[illegible]	5/1/2014	15737	[redacted]	N	N		

car	Vehicle Specific 5-cycle label	5/23/2014	15692	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15678	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15682	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/11/2014	15293	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/11/2014	15313	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	[redacted]	N	N
D	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic System
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic System
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8 / A8L with	Y	Start Stop Tech	nology	with the intake and exhaust cam timing	
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8 / A8L with	Y	Start Stop Tech	nology	with the intake and exhaust cam timing	
N	N	Engine Code	Y	CTNA with 12 cylinder	Y			intake and exhaust cam timing is electronically con	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Co	N		Y		CONTINU	N	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hybrid	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y		Continuously	intake and exhaust cam adjustment	
N	N	Engine Code	N	: CFS	Y		Continuously	intake and exhaust cam adjustment	
N	N	Engine Code	Y	CRDB (RS7)	Y			with the intake and exhaust cam timing	
N	N	Engine Code	N	CYFB - Audi S3	Y		CONTINUOU	SLY VARIABLE VALVE TIMING -	Audi Valvelift System - Exhaust
N	N	Engine Code	Y	CEUC. S6 / S7 models	Y			with the intake and exhaust cam timing	
N	N	Engine Code	Y	CEUC. S6 / S7 models	Y			with the intake and exhaust cam timing	
N	N	Engine Code	Y	CYCA. 6.0 Bi-turbo	Y			with the intake and exhaust cam timing	
N	N	Generation	N	(EVO) 2.0L TFSI with	Y	Audi Valve	System.	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Generation	N	(EVO) 2.0L TFSI with	Y	Audi Valve	System.	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CYCA. 6.0 Bi-turbo	Y			with the intake and exhaust cam timing	
N	N	Engine Code	N	CVAB. Bentley Continental GT	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	Y	CYCA. 6.0 Bi-turbo	Y			with the intake and exhaust cam timing	
N	N	Engine Code	N	CVAB. Bentley Continental GT	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	Y	CYCA. 6.0 Bi-turbo	Y			with the intake and exhaust cam timing	
N	N	Engine Code	N	CVAB. Bentley Continental GT	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N		Y		Cylinder deactivation	Y	Variable Numbering	3, 2, 5, 8	sing of intake and exh

| | | |

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									

alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib

alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
tolled and hydraulically adjusted.

1	Lithium Ion	266	5.00	37.0	On-Board

EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
valves only
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib

alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
ECHANICAL-HYDRAULIC
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
ECHANICAL-HYDRAULIC
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition of reactive reactions are prohib
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.

ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
Electrical Regen Brake	Both	Y						1	AC Induction
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
		40		GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 504 00
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 504 00
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				MFI	Multipoint/sequential fuel injection			N	5W30 VW 504 00
				MFI	Multipoint/sequential fuel injection			N	0W40 / VW50200

MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
MFI	Multipoint/s	N	5W30 VW
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
MFI	Multipoint/s	N	5W30 VW
GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y50700	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N50500	No	Auto(AM-S7)	Auto(AM-S7)						
N50500	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N50500	No	Auto(AM-S7)	Auto(AM-S7)						
N50500	No	Manual(M6)	Manual(M6)						
N50700	No	Auto(AM-S7)	Auto(AM-S7)						
N50700	No	Auto(AM-S7)	Auto(AM-S7)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N50700	No	Auto(AM-S7)	Auto(AM-S7)						
N50700	No	Auto(AM-S7)	Auto(AM-S7)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro					
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro					
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
NVW50500	No	Auto(S8)	Auto(S8)						

N	50500	No	Auto(AM-S7)	Auto(AM-S7)
Y	50700	Yes	Auto(AM-S	Auto(AM-S
Y	50700	Yes	Auto(AM-S7)	Auto(AM-S7)
N	50700	No	Auto(AM-S	Auto(AM-S VENENO
N		No	Auto(AM-S7)	Auto(AM-S7)
N		No	Auto(AM-S6)	Auto(AM-S6)
N		No	Manual(M6)	Manual(M6)
N		No	Auto(S6)	Auto(S6)
N		No	Auto(AM-S6)	Auto(AM-S6)
N		No	Auto(AM-S6)	Auto(AM-S6)
N		No	Manual(M6)	Manual(M6)
N		No	Auto(AM-S6)	Auto(AM-S6)
N		No	Auto(S6)	Auto(S6) Tiguan front
N		No	Auto(S6)	Auto(S6)
N		No	Auto(S8)	Auto(S8)
N		No	Auto(S8)	Auto(S8)

[redacted]	EPA Calculated Gas G	[redacted]	[redacted] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.0APA	9		
36.2	[redacted]	7	7	FVGAV02.0APA	9		
34.3	[redacted]	6	6	FVGAV02.0APA	9		
35.2	[redacted]	7	7	FVGAV02.0APA	9		
35.4	[redacted]	7	7	FVGAV02.0AUB	5		
30.9	[redacted]	6	6	FVGAJ02.0AUF	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
30.9	[redacted]	6	6	FVGAJ02.0AUF	5		
30.9	[redacted]	6	6	FVGAJ02.0AUF	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
36.9	[redacted]	7	7	FVGAV02.0AUB	5		
30.0	[redacted]	5	5	FVGAV02.0AUB	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
28.0	[redacted]	5	5	FVGAV04.0NUA	5		
36.9	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
27.6	[redacted]	5	5	FVGAV04.0NUA	5		
21.1	[redacted]	4	4	FVGAV06.3VUM	5		
29.5	[redacted]	5	5	FVGAJ02.0AUF	5		
30.0	[redacted]	5	5	FVGAV02.	5		
29.5	[redacted]	5	5	FVGAV02.0AUA	5		
29.6	[redacted]	5	5	FVGAJ02.0AUF	5		
34.3	[redacted]	7	5	FVGAJ03.0NU4	5		
34.0	[redacted]	6	6	FVGAT02.0AUH	5		
28.1	[redacted]	5	4	FVGAT03.0NU3	5		
23.1	[redacted]	4	4	FVGAT03.0ALT	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
22.8	[redacted]	4	4	FVGAV04.2NLB	5		
22.6	[redacted]	4	4	FVGAV04.2NLB	5		
24.1	[redacted]	4	4	FVGAV04.0NUA	5		
33.2	[redacted]	6	6	FVGAV02.0AUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.0	[redacted]	5	5	FVGAV04.0NUA	5		
33.3	[redacted]	6	6	FVGAV02.0AUA	5		
33.3	[redacted]	6	6	FVGAV02.0AUA	5		
23.7	[redacted]	4	4	FVGAV04.0NUA	5		
19.5	[redacted]	3	3	FVGAV06.0VLN	5		
21.9	[redacted]	4	4	FVGAV04.0NUA	5		
18.3	[redacted]	3	3	FVGAV06.0VLN	5		
21.9	[redacted]	4	4	FVGAV04.0NUA	5		
18.3	[redacted]	3	3	FVGAV06.0VLN	5		
15.9	[redacted]	1	1	FVGAV06.8ELP	5		

12.6	[redacted]	1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.	5
14.6		1	1 FVGAV06.5LLR	5
15.8		1	1 FVGAV06.	5
20.0		3	3 FVGAV05.2NLE	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

FVGAV02.0VPE	7
FVGAV02.0VPE	7

[illegible]	You Save$	You Spend$	City CO2	Hwy CO2	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	435	307	377			
	0		398	277	343			
		1000	435	307	377			
		1000	435	307	377			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
	1250		416	267	349			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1500	444	333	394			
		1500	451	312	389			
		1500	446	316	387			
		1500	452	322	393			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			
	0		395	284	345			
	0		395	284	345			
		4000	580	347	475			
		8000	710	421	580			
		5750	638	370	517			
		8000	736	443	604			
		5750	638	370	517			
		8000	736	443	604			
		11000	840	501	688			

	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	11000	831	523	692
	6750	629	441	544
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
750		358	271	319
750		355	258	311
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	[illegible] combined CO2 value (as shown on Label)		
[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5
289.0	188.0	243.6	362.1	255.5	314.1
305.0	200.0	257.8	378.6	280.1	334.3
294.0	198.0	250.8	366.0	271.0	323.2
292.0	199.0	250.2	373.7	280.2	331.6
344.0	218.6	287.6	435.1	306.6	377.3
321.2	202.4	267.7	398.0	276.6	343.4
344.0	218.6	287.6	435.1	306.6	377.3
344.0	218.6	287.6	435.1	306.6	377.3
321.2	202.4	267.7	398.0	276.6	343.4
282.0	189.0	240.2	360.0	272.0	320.4
358.0	219.0	295.4	452.0	306.0	386.3
331.0	194.0	269.4	415.7	267.3	348.9
331.0	194.0	269.4	415.7	267.3	348.9
376.5	225.0	308.3	473.4	302.9	396.7
391.0	224.0	315.9	483.9	299.0	400.7
339.0	198.0	275.6	425.6	280.1	360.1
376.5	225.0	308.3	473.4	302.9	396.7
396.0	226.0	319.5	492.3	309.7	410.1
515.0	310.0	422.8	640.3	403.3	533.6
352.0	238.0	300.7	444.5	332.7	394.2
357.5	223.0	297.0	451.0	312.5	388.7
357.0	230.0	299.9	445.6	315.7	387.1
358.0	230.0	300.4	451.6	321.9	393.2
348.0	231.0	295.4	430.5	328.5	384.6
380.0	223.0	309.4	369.0	298.0	337.0
446.0	260.0	362.3	541.0	369.0	463.6
458.0	295.0	384.6	569.6	409.5	497.6
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
466.0	296.0	389.5	562.0	379.0	479.6
463.0	307.0	392.8	558.0	398.0	486.0
467.0	253.0	370.7	573.0	336.1	466.4
311.0	214.0	267.4	381.4	289.2	339.9
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7

885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
708.0	392.0	565.8	831.0	523.0	692.4
524.0	346.0	443.9	628.6	441.0	544.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	[illegible]	Comb Vol Higher	Final Label	EPA_FUEL	EPA_GHG	EPA_AMT
	N	3.7	3.7			
	N	3.6	3.6			
	N	3.8	3.8			
	N	3.7	3.7			
	N	3.7	3.7			
	N	4.2	4.2			
	N	3.8	3.8			
	N	4.2	4.2			
	N	4.2	4.2			
	N	3.8	3.8			
	N	3.6	3.6			
	N	4.3	4.3			
	N	3.4	3.4			
	N	3.4	3.4			
	N	4.5	4.5			
	N	4.5	4.5			
	N	3.6	3.6			
	N	4.5	4.5			
	N	4.5	4.5			
	N	5.9	5.9			
	N	4.3	4.3			
	N	4.3	4.3			
	N	4.3	4.3			
	N	4.3	4.3			
	N	3.7	3.7			
	N	3.8	3.8			
	N	4.5	4.5			
	N	5.6	5.6			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.6	5.6			
	N	5.6	5.6			
	N	5.3	5.3			
	N	3.8	3.8			
	N	5.0	5.0			
	N	5.0	5.0			
	N	5.0	5.0			
	N	3.8	3.8			
	N	3.8	3.8			
	N	5.3	5.3			
	N	6.7	6.7			
	N	5.9	5.9			
	N	6.7	6.7			
	N	5.9	5.9			
	N	6.7	6.7			
	N	7.7	7.7			

N	10.0	10.0
N	7.7	7.7
N	8.3	8.3
N	7.7	7.7
N	6.2	6.2
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.6	3.6
N	3.6	3.6
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

| [redacted] | [redacted] | [redacted] |

Mr Richard E Thomas Jr
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Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 6/5/2014 4:37:01 PM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of June 4, 2014

Hi Dave;

I have made a correction to Index #62, to correct the adjusted rounded highway value. It should be good to go now.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, June 05, 2014 11:14 AM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of June 4, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of June 4, 2014

Attached are the data in Verify as of June 4, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on June 9, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Snyder, Jim
Sent: Thur 6/5/2014 6:08:33 PM
Subject: RE: 2015 Audi 2.0L FFV Test Group Fuel Economy Labels

Richard, I think I saw your number while I was on another call. I approved the Audis yesterday. I just saw Linc and reminded him that there's a bunch to sign.

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, June 03, 2014 1:36 PM
To: Good, David
Cc: Snyder, Jim
Subject: 2015 Audi 2.0L FFV Test Group Fuel Economy Labels

Hi Dave;

I just completed five 2015 labels for the carry over 2.0L automatic quattro models, index numbers 064 through 068, into Verify. These models are on the ship to the US and we expect to have a rolling release of these models once they arrive here next week. Label indexes 064, 065 and 066, are carried over but of course the projected volumes are changed so that the sales weighted unrounded numbers are now slightly different. I would like to be sure that there are no rounding errors for these labels as I expect the values will go on Monroney labels next week.

We also have the 3.0L supercharged V6 gasoline models that will be arriving of the same ships. We just spoke to Jim who said he would put the Audi 3.0L V6 test group FVGAJ03.0AUD on the top of his list for issuance of the certificate. I cannot enter labels into Verify until we have a certificate issued. This test group contains nine model type labels that also have to be completed, with the exception of the Audi SQ5 where we have new data. All the other specific model type labels (eight) are carried over.

I don't know your schedule for the audit of labels, but could you let me know if you prefer to have all these new 2015 labels together or could you look at only the index 064-066 labels now?

If you have time you can give me a call to discuss.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

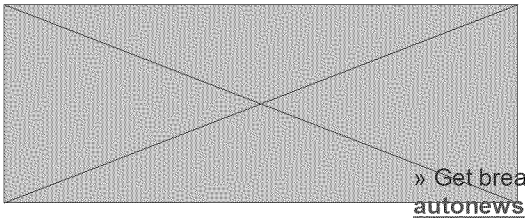
mailto: Richard.Thomas@VW.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 6/5/2014 9:01:48 PM
Subject: DAILY: GM's 'history of failures': Apologies, overhauls, more recalls and hearings after 'brutally tough' report | Ex-Takata exec indicted | UAW: No more concessions

Today's most read story

GM dismisses 15 employees as 'deeply troubling' recall probe is released

June 5, 2014



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TOP NEWS

THE GM REPORT

GM dismisses 15 employees as 'deeply troubling' recall probe is released

UPDATED: 6/5/14 4:24 pm ET -- adds more exec departures
6:45 am U.S. ET | Jun 5

General Motors has dismissed 15 employees, including at least eight executives, after an internal investigation found "a pattern of incompetence and neglect" that led to 11 years of delays in recalling millions of cars for a fatal defect related to flawed ignition switches, CEO Mary Barra said today. ... » READ

Within GM, a clash of cultures

4:38 pm U.S. ET | Jun 5

Page 248 of Anton Valukas' report on what went wrong with General Motors' deadly ignition switch defect outlines how GM's safety efforts run smack into its cost-conscious culture. ... » READ

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Paragon Honda Presenting at the TLS Auto Customer Centricity Summit

Effectively Utilizing Mobile Marketing - Constant connectivity has created new challenges that mobile marketing can help solve. **Brian Benstock, VP & GM** will explain how Paragon Honda has aligned marketing messages across mobile and other channels and how they created consistent, transparent, program driven marketing campaigns that result in increased retention and loyalty.

For more info visit
http://www.tlsummits.com/2014customercentricity/index.h

Former Takata executive indicted in seat belt price-fixing scheme

UPDATED: 6/5/14 3:51 pm ET - adds Takata comment
1:27 pm U.S. ET | Jun 5

A federal grand jury has indicted a former top-tier global sales executive at Takata on a charge of participating in a conspiracy to fix the prices for seat belts, the Department of Justice said today. ... » READ

REACTION: What analysts, lawmakers and others are saying about GM recall findings

UPDATED: 6/5/14 2:13 pm ET
8:23 am U.S. ET | Jun 5

A roundup of what analysts, lawmakers and government officials and others are saying about the findings in GM's internal report about delayed recalls. ... » READ

UAW primed for struggles ahead, Williams says

2:13 pm U.S. ET | Jun 5

New UAW President Dennis Williams signaled in his inaugural speech that the union's priorities will be the 2015 contract talks with the Detroit 3 and national elections this year and in and 2016. ... » READ

MOST READ (Last 7 days)

Auto sales rise 11% as 'everything came together'

Hail ravages thousands of vehicles at Nebraska, Iowa dealerships

Google's vision upends notions of

car and driver

Motor Trend, Automobile magazines reshaped in consolidation

Before 'The Brady Bunch,' Ann B. Davis starred for Ford

Overhaul ordered for GM's legal department

2:46 pm U.S. ET | Jun 5

Senior lawyer Bill Kemp ousted by GM following Valukas review, report says

12:51 pm U.S. ET | Jun 5

Barra, Valukas summoned to Capitol Hill for hearings

11:19 am U.S. ET | Jun 5

Angry Barra tells troops: Never forget what happened

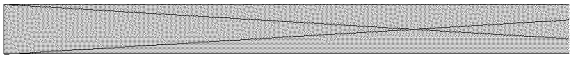
12:17 pm U.S. ET | Jun 5

UPCOMING EVENTS

» June 3 - Rising Stars
» June 4 - ANE Congress
» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

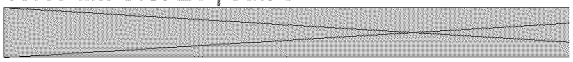
» June 12 - Group Vehicle Redistribution by FirstLook
» June 24 - Automotive Innovation



GM recall blitz isn't over

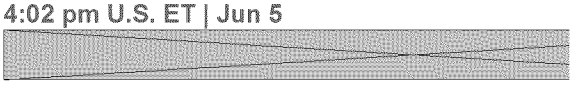
UPDATED: 6/5/15 2:36 pm ET - adds CFO, Barra comments

10:19 am U.S. ET | Jun 5



GM says '14 profit may be ahead of plan, sees Europe in the black by mid-decade

4:02 pm U.S. ET | Jun 5



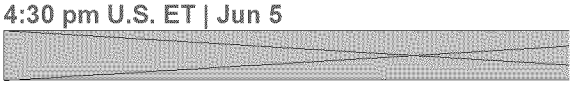
GM says death toll could rise; Feinberg will set compensation terms

12:35 pm U.S. ET | Jun 5



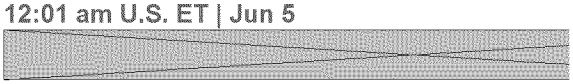
New UAW chief vows to keep pressure on transplants

4:30 pm U.S. ET | Jun 5



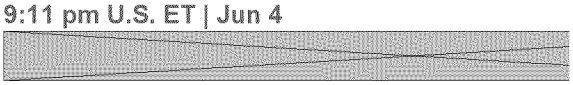
Honda, Mercedes rank best for quality and value in new study

12:01 am U.S. ET | Jun 5



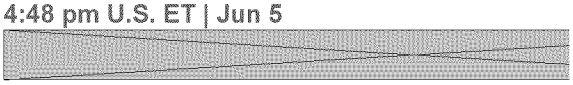
Canada's auto suppliers showcase connected crossover

9:11 pm U.S. ET | Jun 4



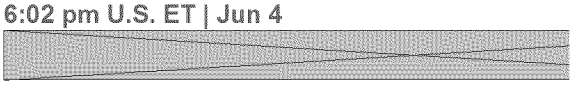
Chrysler recalls 10,700 SUVs for cruise control defect

4:48 pm U.S. ET | Jun 5



Toyota's ad agency hires new creative chief

6:02 pm U.S. ET | Jun 4



Dana to expand Ohio HQ, new UAW contract approved

5:56 pm U.S. ET | Jun 4

Mercedes to double downtown outlets as customers move to cities

12:59 pm U.S. ET | Jun 5

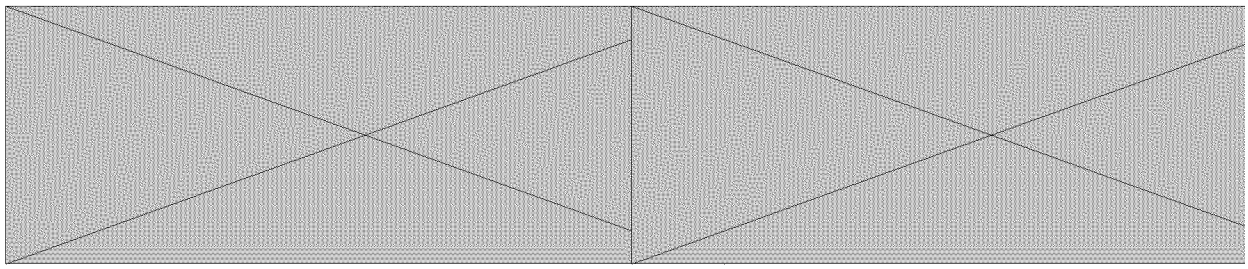
Audi's 11% May sales rise reinforces challenge to BMW

8:33 am U.S. ET | Jun 5

UPCOMING WEBINARS
» June 3 - Rising Stars
» June 4 - ANE Congress
» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS
» June 12 - Group Vehicle Redistribution by FirstLook
» June 24 - Automotive Innovation by IBM

UPCOMING WEBINARS
» June 18 - Third-Party Sites and Online F&I
» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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. .

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7
Sent: Thur 6/5/2014 9:31:55 PM
Subject: SCR/AECD Description Update

Hello Jim:

As we discussed by telephone, the update to the 2.0L TDI SCR description has been submitted to VERIFY shortly after 2:00 p.m. today.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

E-Mail: Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Giles, Michael (EEO)
Sent: Fri 6/6/2014 12:54:36 PM
Subject: VW Group - Decision Info Golf 1.8L Automatic

Hello Jim,

Today we submitted vehicle info, test results and decision info for the Golf 1.8L with automatic trans for test group FVGAV02.0APA.

Vehicle ID: FAPA-RAF / config # 0.

Purpose: FEDV

Tests submitted: FTP / Hwy

Our understanding as of earlier in the year was that you might be interested in this vehicle, but we are not sure if that is still the case.

Thanks,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

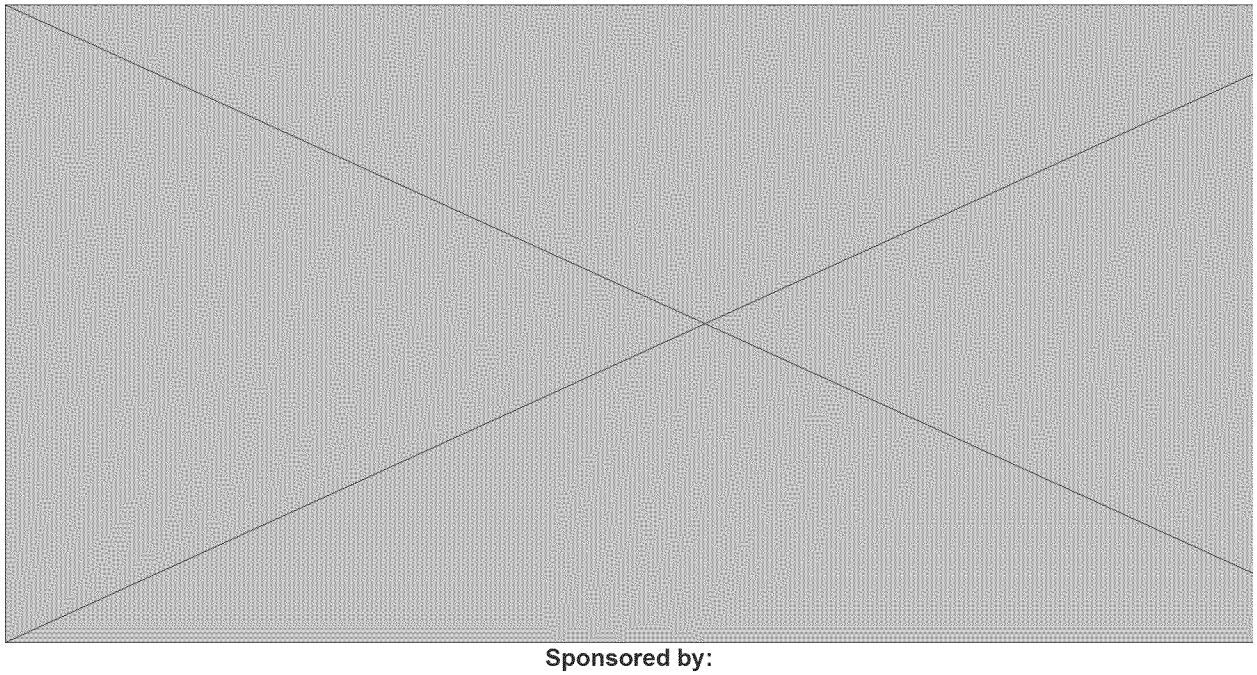
Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

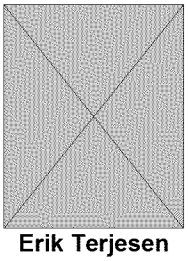
mailto: Michael.Giles@VW.com

To: Bunker, Byron[bunker.byron@epa.gov]
From: andrew@cleanenergy.com
Sent: Fri 6/6/2014 3:27:34 PM
Subject: Final Program now available: FutureDRIVE 2014 Transportation Roundtable, June 25-27, 2014, Denver, USA

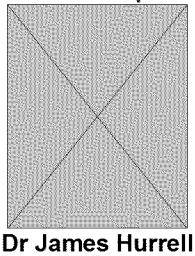


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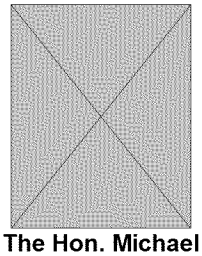
Speakers & Session Chairs will include:



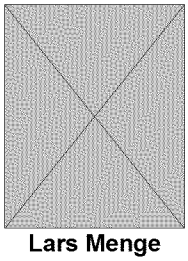
Erik Terjesen
Director, Technology Licensing
Qualcomm HALO



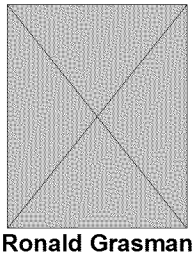
Dr James Hurrell
Director
National Center for Atmospheric Research



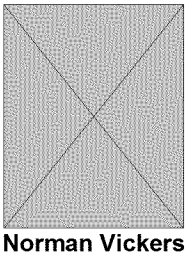
The Hon. Michael Hancock
Mayor
City & County of Denver



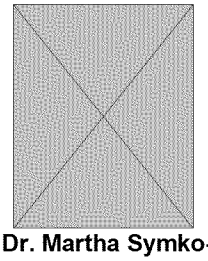
Lars Menge
General Manager Product Strategy
Volkswagen of America



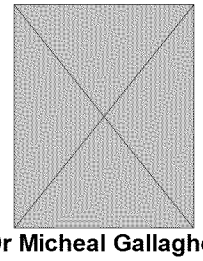
Ronald Grasman
General Manager, Fuel Cell Operations
Mercedes-Benz R&D USA



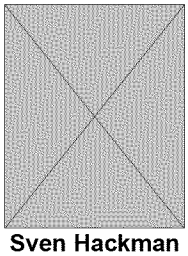
Norman Vickers
Entrepreneur In Residence
Infield Capital



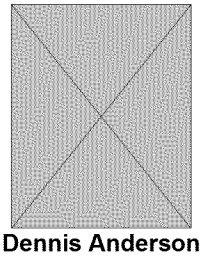
Dr. Martha Symko-Davies
Director Partnerships, Energy Systems Integration
NREL



Dr Micheal Gallagher
Senior Adviser, Former President, COO & Director
Westport Innovations



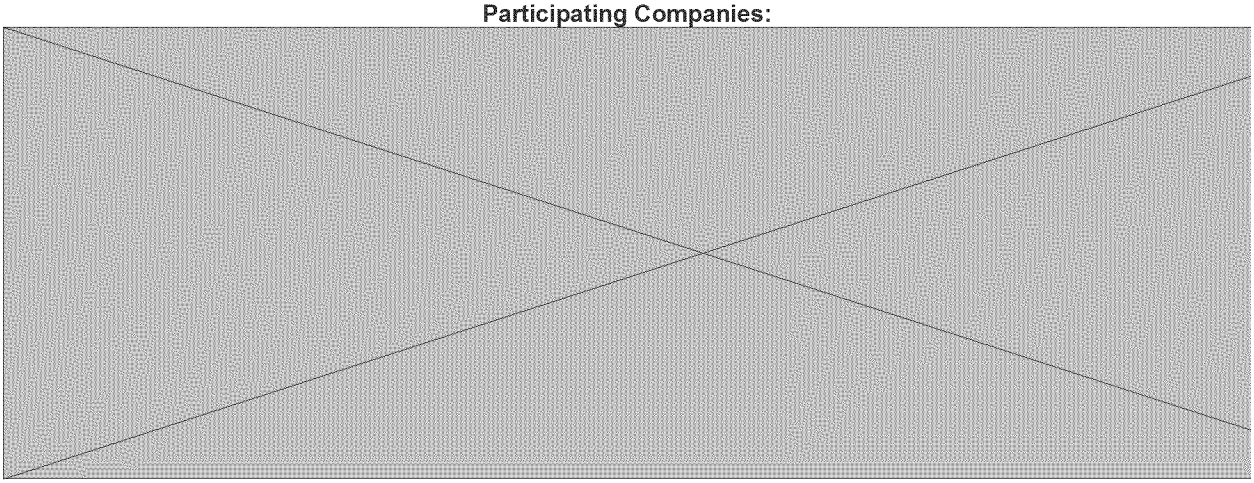
Sven Hackman
Director
Veremonte



Dennis Anderson
Senior Manager, Logistics Engineering
Kroger

›› View Program and Full Speaker List

Participating Companies:



Dear Byron,

The final program is now available for Montreux Energy's **FutureDRIVE 2014 Transportation Roundtable**, to be held **June 25-27, 2014** at the Sheraton Downtown Hotel in Denver, Colorado. Our theme is *"Leadership in Clean Energy & Climate: New Directions in Policy & Infrastructure Investment."* Qualcomm is sponsoring this impactful event on how can compare the major options for transportation fuels and powertrains, with perspectives from many leading energy and automotive thought-leaders. This event is on a sell-out pace. If you wish to join us please register soon to reserve your place. We also are nearing capacity at the Sheraton Hotel in Denver. ›› **PROGRAM AND REGISTRATION**

Confirmed futuredrive speakers & Session chaiRS:

- **The Honorable Michael Hancock**, *Mayor*, **City and County of Denver**

- **Dr. James Hurrell**, *Director*, **National Center for Atmospheric Research**
- **Erik Terjesen**, *Director, Technology Licensing*, **Qualcomm HALO**
- **Lars Menge**, *General Manager, Product Strategy*, **Volkswagen of America**
- **Dennis Anderson**, *Senior Manager Logistics Engineering*, **Kroger / King Soopers**
- **Richard Adams**, *Manager, Innovation and Entrepreneurship Center*, **NREL**
- **Ronald Grasman**, *General Manager, Fuel Cell Operations*, **Mercedes-Benz R&D USA**
- **Robert Tschupp**, *VP & General Manager*, **Colorado Mountain Express | Vail Resorts**
- **Dr. Michael Gallagher**, *Sr Adviser; Fmr President, COO & Director*, **Westport Innovations**
- **Harrison Clay**, *President*, **Clean Energy Renewable Fuels**
- **Erik Neandross**, *CEO*, **Gladstein, Neandross**
- **Sven Hackmann**, *Director*, **Veremonte**
- **Micheal Austin**, *Vice President*, **BYD Motors**
- **Steve Barwick**, *City Manager*, **City of Aspen**
- **Mike Scarpati**, *E-Mobility Industry Manager*, **BASF**
- **Norman Vickers**, *Entrepreneur in Residence*, **Infield Capital**
- **Jim Stanley**, *VP & General Manager*, **Blink Car Charging Network**
- **Brett Hauser**, *President*, **Greenlots**
- **Chris Gearhart**, *Director, Transportation & Hydrogen Systems Center*, **NREL**
- **Jerry Johnson**, *Western Regional Manager*, **Cummins Westport**
- **Tyler Svitak**, *Clean Cities Manager*, **American Lung Association of Colorado**
- **Tom Pacheco**, *Senior Fleet Coordinator*, **Encana Oil & Gas USA**
- **Aaron Harris** *Technical Director, Hydrogen Energy Systems*, **Air Liquide Americas**

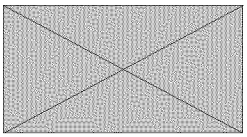
- **Michael Koonce**, *CEO*, **IGX Group – H2 Fueling Services**
- **Cindy Bosco**, *Environmental Scientist*, **City & County of Denver**
- **Eric Van Orden**, *Strategic Leader in Energy Innovation*, **Xcel Energy**
- **Tony Markel**, *Senior Engineer, Electric Vehicle Grid Integration*, **NREL**
- **Daryl Wilson**, *President and CEO*, **Hydrogenics Corporation**
- **Christine Shapard**, *Executive Director*, **Colorado Cleantech Industry Association**
- **Dr. Martha Symko-Davies**, *Director Partnerships, Energy Systems Integration*, **NREL**
- **Tim Jackson**, *President*, **Colorado Automotive Dealers Association**

Key futureDrive topics:

- **The Power of Cities and the Future of Clean Mobility:** *Investing in Systems, Networks, & Fueling Infrastructure*
- **Climate & Air Quality as Drivers for Change:** *Emissions Reduction Throughout the Auto Supply Chain*
- **Electrification of Drivetrains:** *Electric Vehicles & Hydrogen Fuel Cell Electric Vehicles*
- **Optimizing Our North American Energy Resources:** *Natural Gas, Cleaner Fuels, Renewables, & Grid Storage*
- **Engaging Customers:** *Choice & Expectations for Cost, Safety, Quality, Range, and Performance*

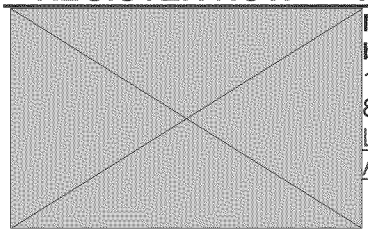
PLEASE NOTE: As with all Montreux Energy events, seating is strictly limited and closed to the press to ensure a frank and open dialogue.

We are all hoping to see you June 25-27th!

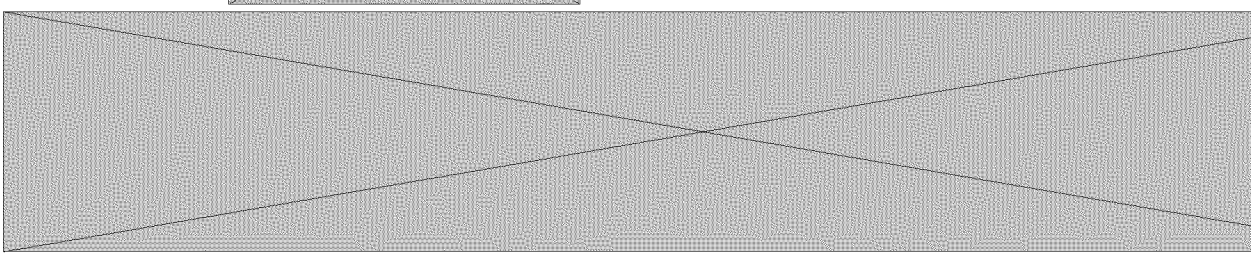


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Alicia.Qliebo@sheraton.com



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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Giles, Michael (EEO)
Sent: Fri 6/6/2014 6:37:02 PM
Subject: VW Group - Decision Info Passat 1.8L Manual

Hello Jim,

Test results and decision info for the Passat 1.8L with manual trans for test group FVGAV02.0VPD have been submitted.

Vehicle ID: VW411-4-0165/15 /config # 0.

Purpose: FEDV

Tests submitted: FTP / Hwy

Thanks,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Fri 6/6/2014 6:58:10 PM
Subject: VW Group Decision Info Federal Only Passat 1.8L

Hello Jim,

Test results and decision information have been submitted for the Passat 1.8L Federal only Testgroup: FVGAV02.0VBD, for the Automatic 6 Speed and Manual 5 speed. Vehicle ID's and info are below.

……..

Automatic

Vehicle ID: VW411-4-0168/15 /config #0

Purpose: FEDV

Tests Submitted: FTP / Hwy

……..

Manual

Vehicle ID: VW411-4-0166/15 /config #0

Purpose: FEDV

Tests Submitted: FTP / Hwy

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Andrew Kosiak[AKosiak@tuthill.com]; Atit Amin[atit.amin@exxonmobil.com]; Brendan Foster[brendan@benecor.net]; C Moughlor[camoughlor@ashland.com]; Dean, Clifford[Dean.Clifford@epa.gov]; D Wyeany[dwyeany@ashland.com]; David Kayes[davidkayes@freightline.com]; David Shaw[dshaw@cleanemissionfluids.com]; Dennis Smith[dennis.a.smith@ee.doe.gov]; F Lockwood[IMCEAEX-_O=AUTO+20ALLIANCE_OU=AAM_cn=Recipients_cn=FLockwood@autoalliance.org]; Frank Rutten[Frank.Rutten@shell.com]; G Croce[GCroce@chevron.com]; Greg McAfee[greg.mcafee@chsinc.com]; Hauke Braack[hauke.braack@exxonmobil.com]; I Ex. 6 J Barr[jbarr@ryder.com]; J Fellman[jfellman@nacsonline.com]; J Suchecki[jsuchecki@emamail.org]; Jackie Yeager[jackie.m.yeager@cummins.com]; jsong@meca.org[jsong@meca.org]; Karl Tasik[karl.tasik@volvo.com]; Ken Howden[ken.howden@ee.doe.gov]; Ex. 6 ; Lance Tunick[tunick@vsci.net]; Larry Northup[larry.northup@aftermarket.org]; Wehrly, Linc[wehrly.linc@epa.gov]; M Buczek[mbuczek@venturepointresearch.com]; Marcel de Kort[marceldekort@greenchem-adblue.com]; Mark Busch[mbusch@cleanemissionfluids.com]; Ex. 6 ; Oliver Baer[obaer@cleanemissionfluids.com]; Ex. 6 Patrick Kelly[kellyp@api.org]; Patrik Klintbom[patrik.klintbom@volvo.com]; Robert Fasnacht[robert.fasnacht@volvo.com]; Robert Jorgensen[robert.a.jorgensen@cummins.com]; Robert M. Clarke[robertmclarke@truckmfgs.org]; Robert Rupert[robert.rupert@dot.gov]; Rosemary Perry[rosemary.perry@aftermarket.org]; Ross Johnson[Ross.Johnson@yara.com]; Ryan Carroll[ryan.carroll@aftermarket.org]; Steve Berry[steve.berry@volvo.com]; T Columbus[tcolumbus@steptoe.com]; Taylor Davis[davistaylor@johndeere.com]; Goff_Terry_A@cat.com[Goff_Terry_A@cat.com]; Uzel Memed[memed.uzel@volvo.com]; Vic Meloche[vic.meloche@detroitdiesel.com]; Warren Kotacska[wkotacska@colonial-chemical.com]; Yuri Kalish[yuri.kalish@detroitdiesel.com]; Zafar Shaikh[fshaikh@ford.com]; ldc@cervantes-delgado.com[ldc@cervantes-delgado.com]; 'Lonsdale, Barry'[BLonsdale@terraindustries.com]; 'Groeneveld, Michel'[michel.groeneveld@dureal.com]; D Gilligan[dgilligan@pmaa.org]; 'KAYLC@kochind.com'[KAYLC@kochind.com]; 'Brodt-Giles, Debbie'[Debbie_Brodt_Giles@nrel.gov]; 'Claassen, Matt'[CLAASSEM@kochind.com]; Ex. 6 'Christopher Pett'[Christopher.Pett@integer-research.com]; 'Johnson Joy'[joy.johnson@volvo.com]; rbrezny@meca.org[rbrezny@meca.org]; 'Brandon Wright'[bwright@pmaa.org]; 'robert.aman@skf.com'[robert.aman@skf.com]; 'shauncmmsusa@nycap.rr.com'[shauncmmsusa@nycap.rr.com]; Friedrich Krahn[friedrich.krahn@daimler.com]; 'thomas.troeger@rehau.com'[thomas.troeger@rehau.com]; 'manoj.tummala@gm.com'[manoj.tummala@gm.com]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]; 'toshiya.shiozawa@hino.co.jp'[toshiya.shiozawa@hino.co.jp]; 'kato@hino.com'[kato@hino.com]; 'daniels@hino.com'[daniels@hino.com]; 'bachelderd@api.org'[bachelderd@api.org]; 'gsgutowski@aaamichigan.com'[gsgutowski@aaamichigan.com]; 'r.boeker@alumag.de'[r.boeker@alumag.de]; Ex. 6 ; rsompel@cfindustries.com[rsompel@cfindustries.com]; saverio.verduci@gm.com[saverio.verduci@gm.com]; erich@thebeckercompanies.com[erich@thebeckercompanies.com]; brent.calcut@detroitdiesel.com[brent.calcut@detroitdiesel.com]; halfano@natso.com[halfano@natso.com]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Steve Mazure[srm2@chrysler.com]; Klaus Land[klaus.land@daimler.com]; 'dbilby@cfindustries.com'[dbilby@cfindustries.com]; 'shawn.whitacre@cummins.com'[shawn.whitacre@cummins.com]; 'mansour.masoudi@us.bosch.com'[mansour.masoudi@us.bosch.com]; 'andy.arendt@chsinc.com'[andy.arendt@chsinc.com]; 'mikedelaney@freightliner.com'[mikedelaney@freightliner.com]; 'adiamond@cfindustries.com'[adiamond@cfindustries.com]; 'kdoran@quixotegroup.com'[kdoran@quixotegroup.com]; 'kingsley.maunder@integer-research.com'[kingsley.maunder@integer-research.com]; Mike Zammit[mz10@chrysler.com]; 'alistair.wallace@integer-research.com'[alistair.wallace@integer-research.com]; 'akl@airbluefluids.com'[akl@airbluefluids.com]; 'otis.clay@agcocorp.com'[otis.clay@agcocorp.com];

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From: Giedrius Ambrozaitis
Sent: Mon 6/9/2014 6:52:19 PM
Subject: SCR Stakeholder Group -- ISO Comment conf call tomorrow June 10

The next SCR Stakeholder conference call to discuss comments to ISO is scheduled for tomorrow June 10 at 1:00 PM eastern. Please see call in details below.

Please join me in an Adobe Connect Meeting.

Meeting Name: SCR Stakeholders - ISO 22241 Review VI

Summary:

Invited By: Jeff Harmening (harmeningj@api.org)

When: 06/10/2014 1:00 PM - 2:00 PM

Time Zone: (GMT-05:00) Eastern Time (US and Canada)

Audio Conference Details:

Non-Responsive

To join the meeting:

http://energyapi.adobeconnect.com/ Non-Responsive

Jeffrey Harmening

Program Associate

If you have never attended an Adobe Connect meeting before:

Test your connection: http://energyapi.adobeconnect.com/common/help/en/support/meeting_test.htm

Get a quick overview: http://www.adobe.com/products/adobeconnect.html

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The SCR Stakeholder Group (formerly called the Urea Stakeholder Group) is made up of industries, organizations and companies interested in urea for mobile source applications.

Participants include:
- Government (US Department of Energy, EPA)
- Automotive and heavy-duty engine and truck manufacturer trade associations

- Fuel retailer and truck stop trade associations
- Oil companies
- Urea distributors

- Petroleum dispenser manufacturers and associations

The main objectives of the SCR Stakeholder Group are:

- To exchange information with US government and other potential urea stakeholders on the potential market and need for urea availability.
- To consider effective education and outreach to consumers and commercial concerns about urea, its use and availability.
- To engage potential providers of urea availability to determine the conditions necessary for provision of retail availability before a profitable market exists.

If you have any questions concerning the SCR Stakeholder Group or the meeting, please call me at (248) 915-8836.

Sincerely,

Giedrius Ambrozaitis
Director, Environmental Affairs
Alliance of Automobile Manufacturers
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From: Ogden, Joan
Sent: Mon 6/9/2014 11:40:12 PM
Subject: RE: Thank you!

Dear Ex. 7

Congratulations on your new role at CARB. I know you will continue the outstanding leadership that has helped make the CAFCP such an influential group in the energy world. Your work has been inspiring and it has been a true pleasure to work with you over the years. I look forward to continuing to work together toward a low carbon future.

Best,

Joan

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Subject: Thank you!

Dear CaFCP members,

Fifteen years ago we started CaFCP with the goal of commercializing fuel cell electric vehicles in California. Today we are on the cusp of realizing the fruits of our time, energy, and commitment – automakers are bringing cars to market, government and private investors are fueling hydrogen station growth, and fuel cell vehicles are gaining recognition and support nationwide.

Having accomplished so much together, I am excited to join the Air Resources Board team to lead the agency's actions supporting fuel cell electric vehicle commercialization. The State of California has a

strong position in facilitating a successful FCEV launch and market growth, and I am eager to contribute to this leadership.

Serving as Executive Director of the California Fuel Cell Partnership has been an honor and a privilege. CaFCP members have shown the true spirit of collaboration by striving for the common good of the industry and our cause, even at times over the immediate needs of your individual organizations. This has been evident in everything from planning road rallies and ride and drives to defining the necessary early market hydrogen station network. Collaboration is essential to making real, significant change in our world, and I'm thrilled to have been part of it.

Together CaFCP members and staff have seen many changes over 15 years, and CaFCP will continue to evolve to meet members' needs. I look forward to working side by side with you to define our future and support the transition to a new executive director. I plan to remain engaged with CaFCP projects, activities and goals after I assume my new position on August 1st. I am as committed as ever to seeing CaFCP succeed, and I look forward to our ongoing partnership.

Thank you so much for your trust and commitment!

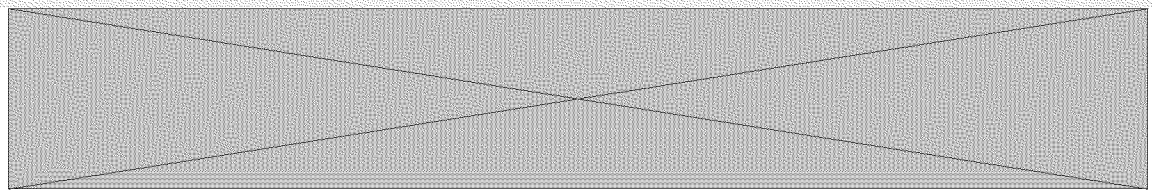
Best regards,

Ex. 7

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www.cafcp.org<http://www.cafcp.org>

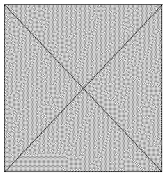
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 6/10/2014 4:04:26 PM
Subject: Green Car Report Daily Headlines

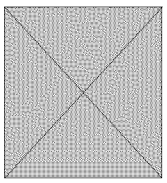
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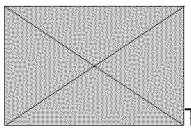
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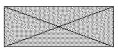
Tesla Superchargers, 2015 VW Golf TDI Driven, MINI Cooper Video: Today's Car News

Jun 10, 2014 03:15 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Tesla Motors mulls opening up its Supercharger DC fast-charging standard to other manufacturers, we drive the 2015 Volkswagen Golf TDI, and there's a confusing new MINI Cooper with five doors. All this and more on Green Car Reports. Ford and Samsung develop a new battery pack for regenerative braking and engine...

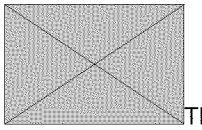
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New 2015 MINI Cooper With Five Doors Confuses...Well, Everyone (Video)

Jun 10, 2014 02:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

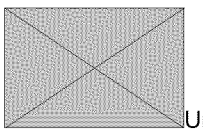
 The new 2015 MINI Cooper five-door is rolling out--at least in Europe--and it appears to be causing some problems. The latest version of the retro-styled subcompact hatchback features two extra doors, a concept that some customers apparently can't come to grips with. A

new ad for the five-door model shows all manner of people--and a dog--confused...

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BMW Smartphone App Helps Cut Home Electric Car Charging Costs

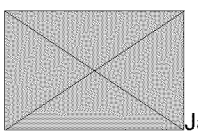
Jun 10, 2014 01:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Unless you're a Tesla owner with access to free Supercharger fast charging stations, there's no better place to charge your electric car than at home. Pick the right electricity tariff, and charging can cost pennies on the dollar next to even the most efficient combustion-engined vehicle. BMW hopes to make it even cheaper for BMW i3 and i8...

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Japan's Government Clamps Down On Tiny Kei Cars, Fearing Irrelevance

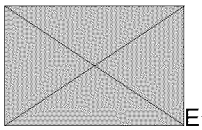
Jun 10, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 Japan does small cars like no other country on earth--mainly because they have to. The nation's Kei-jidosha car class was set up to make a class of car that was cheaper to run, easier to own and small enough to ease parking and minimize congestion. Now, reports The New York Times, these distinctive cars could be under threat. The Japanese...

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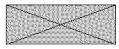
Tesla To Offer Supercharger As Fast-Charging Standard? Free To Drivers, Yes

Jun 10, 2014 12:00 pm | feedback@highgearmedia.com (John Voelcker)

 Electric-car maker Tesla Motors, and more specifically its CEO Elon Musk, has been dropping hints for a while now that it proposes to open up the specifications of its Supercharger DC fast-charging standard for use by other manufacturers. An article yesterday in Engadget claimed Tesla was planning to reveal those designs--possibly involving...

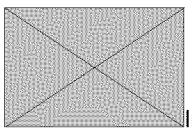
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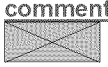


2015 Volkswagen Golf TDI: First Drive Of All-New Diesel Hatchback

Jun 10, 2014 11:30 am | feedback@highgearmedia.com (Bengt Halvorson)

 In today's American car market, 45 miles per gallon is a rare occasion, and 50 miles per gallon is pure fantasy. That's the case for nearly any vehicle that has a fuel tank and isn't a hybrid—and for many hybrids, actually. Enter the 2015 Volkswagen Golf TDI, a vehicle that seems to buck those generalizations completely, with the commendable...

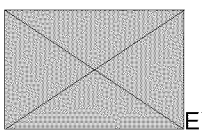
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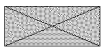
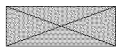


Ford, Samsung's Twin Battery For Braking Regeneration, Stop-Start

Jun 10, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 Electrification is becoming an increasingly important factor in improving the fuel efficiency of vehicles. Cars like the Toyota Prius hybrid made it mainstream, but there are varying degrees to which batteries can be used for saving fuel. MUST SEE: Elio 84-MPG Three-Wheel Prototype: Driven In Parking Lot (Video) One of them is being explored right...

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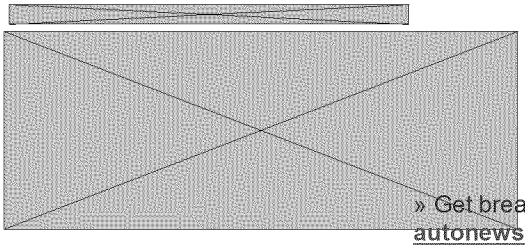
.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 6/10/2014 8:45:57 PM
Subject: DAILY: GM employees are 'owning' Valukas report, Barra says | Chrysler maps out Alfa dealer plans | Automakers oppose Pa. bill allowing Tesla stores | How EVs could get cleaner in U.S.

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Chrysler awards 86 Alfa franchises in U.S., Canada

June 10, 2014



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TOP NEWS

GM employees are 'owning' Valukas report, Barra says

UPDATED: 6/10/14 4:22 om ET - adds stock close
9:27 am U.S. ET | Jun 10

General Motors CEO Mary Barra said today that the company's employees are galvanized by the findings of its internal investigation into a deadly defect that exposed "incompetence" and a troubled corporate culture. ... » READ

Chrysler awards 86 Alfa franchises in U.S., Canada

UPDATED: 6/10/14 1:03 pm ET - adds map, reactions
9:48 am U.S. ET | Jun 10

Chrysler Group has awarded 86 Alfa Romeo franchises in the United States and Canada ahead of the Italian brand's return to the United States later this year. ...
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People Driven Marketing in a Connected World – A growing opportunity for the automotive industry is harnessing the power of people as the engine for data and insights. Kass Dawson, Head Automotive Global Vertical Marketing will share how people-based marketing based on Big Data can help drive more successful business outcomes. For more info visit.

Automakers oppose Pennsylvania's bill allowing Tesla stores

4:26 pm U.S. ET | Jun 10

Automakers are fighting Pennsylvania legislation that would allow electric-vehicle maker Tesla Motors to operate an unlimited number of factory-owned stores in that state. ... » READ

Ford Fiesta production to stay in Germany after cost-cutting labor deal

9:39 am U.S. ET | Jun 10

Ford will make the next generation of the Fiesta small car in Cologne, Germany, targeting $400 million in savings on production costs from 2017 through 2021 because of greater worker flexibility. ... » READ

Nissan, N.Y. clear hurdle as appeals court validates taxi pact

3:17 pm U.S. ET | Jun 10

New York's plan for a new fleet of cabs from Nissan is legal, an appeals court ruled, overturning a judge who said the city's Taxi and Limousine Commission overstepped its authority by requiring owners to buy a specific vehicle. ... » READ

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GABE NELSON

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without doing a thing
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Skyrocketing Jeep in the right place at the right time

[redacted]

Viral video rankings for week of 6/10/2014

Mini doubles doors, VW goes turbo

12:01 am U.S. ET | Jun 10

A man at an outdoor cafe stares at a Mini, puzzled, as two women enter, and two men step out almost simultaneously. Miraculous transformation? ... » Watch the videos

[redacted]

GM's chief information security exec going to Target

3:06 pm U.S. ET | Jun 10

[redacted]

BMW holds off Audi as A3 tightens

[redacted]

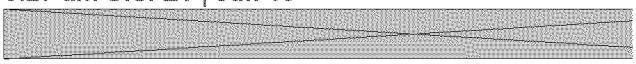
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» Sept. 23 - NY Marketing Seminar
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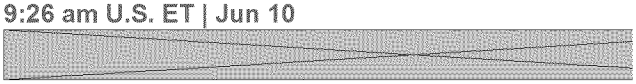
race for luxury-car lead

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Maserati to lift Ghibli, Quattroporte production 20%, reports say

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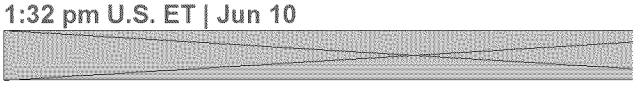
VW names Vazin successor to Cervone as U.S. communications chief

2:06 pm U.S. ET | Jun 10



Supplier Toyoda Gosei to expand N.A. headquarters

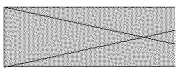
1:32 pm U.S. ET | Jun 10



by Digital Air Strike

» June 24 - Automotive Innovation

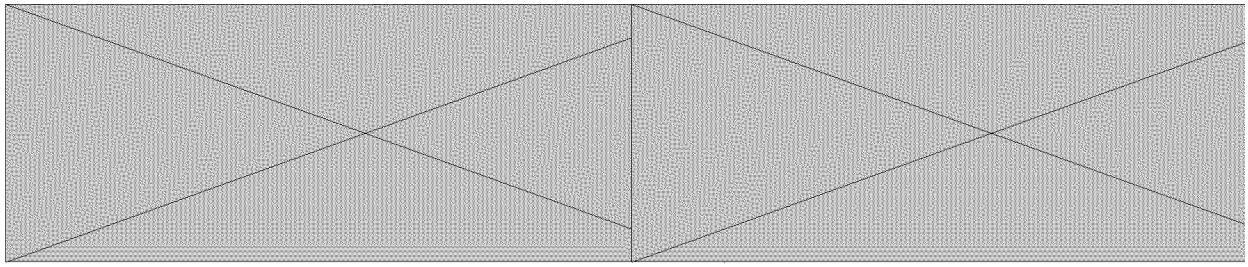
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» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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To: Lieske, Christopher[lieske.christopher@epa.gov]; Moran, Robin[moran.robin@epa.gov]; Olechiw, Michael[olechiw.michael@epa.gov]; Machiele, Paul[machiele.paul@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; French, Roberts[french.roberts@epa.gov]; Pugliese, Holly[pugliese.holly@epa.gov]; Horowitz, Michael[horowitz.michael@epa.gov]; Alson, Jeff[alson.jeff@epa.gov]; Brown, Jarrod[Brown.Jarrod@epa.gov]
Cc: Charmley, William[charmley.william@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]
From: Silverman, Steven
Sent: Tue 6/10/2014 9:43:02 PM
Subject: RE: FFV Manufacturer Guidance for Review- Comments Requested by 6/11
FFV guidance compared to March 2013 Draft_6-5-14mjh.docx. silverman.docx

Edits from Michael and me attached (in light blue and red, respectively). To the RLSO version.

In addition to these comments, we both had the over arching comment that we need to be more positive about use of AEO 2014 rather than relying on it being the latest thing out there (for one thing, we weren't relying exclusively on AEO 2013 in the draft, but averaged it in with other things). Also, although it is already pretty clear that we are projecting use patterns per vehicle life (e.g. fig all going out into the 2030s), not just model year, I don't remember seeing a narrative stmt stressing that element of projection.

From: Lieske, Christopher
Sent: Thursday, June 05, 2014 5:03 PM
To: Moran, Robin; Olechiw, Michael; Machiele, Paul; Wehrly, Linc; French, Roberts; Pugliese, Holly; Silverman, Steven; Horowitz, Michael; Alson, Jeff; Brown, Jarrod
Cc: Charmley, William; Bunker, Byron; Simon, Karl
Subject: FFV Manufacturer Guidance for Review- Comments Requested by 6/11

Hi all –

Attached for review is a draft of the final manufacturer guidance establishing an FFV weighting factor (F factor) for MYs 2016-2018. Our understanding is that the goal is to finalize the guidance at the same time RFS 2014 is finalized. The weighting factor is based on direction from the last briefing. We are basing the F factor exclusively on AEO 2014 projections, resulting in an F factor of 0.14. We used an approach for the final technical document (attached to the guidance letter) where we respond to relevant comments within the document rather than have a separate response to comments document. The discussion is set up similar to a preamble: this is what we did in the draft analysis, this is what commenters said, and this is what we are doing in the final analysis. Therefore, you will see the "draft guidance" discussed within the context of

what we are doing for the final. I am also attaching a compare version which shows changes from the March 2013 draft manufacturer guidance for reference.

As with the draft guidance, ASD has the lead in drafting the technical document and CD has the lead for finalizing the manufacturer guidance letter, distribution, web, etc.

Paul, you will see a few sections flagged in particular for your review.

Please provide comments by **6/11**, if possible. We are planning to send a draft to NHTSA for review on 6/13.

Thanks

Chris

Guidance Letter
June xx, 2014

E85 Flexible Fuel Vehicle Weighting Factor for Model Year 2016-2018 Vehicles

Under EPA's light-duty vehicle greenhouse gas (GHG) program, starting with the 2016 model year, the regulations describe two pathways for determining the GHG value for a gasoline-E85 flexible fuel vehicle (FFV). The default approach is to use the value determined for operation on gasoline (see 40 CFR 600.510-12(j)(2)(vi)). The alternative is to combine the gasoline and E85 GHG values together in a way that accounts for the real-world use of E85 with a weighting factor (this weighting factor is described as "F" in the regulations (see 40 CFR 600.510-12(j)(2)(vi) and (k)).

The regulations describe two different approaches that may be used to determine the value of F. First, upon written request from a manufacturer, EPA "will determine and publish by written guidance an appropriate value of F for each requested alternative fuel based on the Administrator's assessment of real-world use of the alternative fuel" (see 40 CFR 600.510-12(k)(1)).[1] Second, a manufacturer may submit its own data to EPA that demonstrates the real-world use of the alternative fuel and determines an appropriate value of F specific to its vehicles (see 40 CFR 600.510-12(k)(2)).

Several manufacturers have requested that EPA expeditiously determine and publish a value of F for E85 to apply beginning with model year 2016 FFVs. EPA released a draft guidance document in March 2013, followed by an opportunity for public comment. Based on EPA's analysis following the comment period, EPA is issuing this guidance with respect to E 85 alternative fuel as directed by 40 CFR 600.510-12(k)(1).

For the 2016-2018 model years, manufacturers of E85 – fueled FFVs may use F=0.14 in the calculation described in 40 CFR 600.510-12(j)(2)(vi). This is optional; manufacturers may continue to use the default value of F=0, thus not taking account of the E85 carbon-related exhaust emissions (CREE) value (or they may determine and seek approval for their own manufacturer-specific F factor, as described above). Manufacturers may continue to use F=0.14 through the 2018 model year, unless EPA revises the weighting factor. EPA will establish a value of F for model years 2019 and later in future guidance. The derivation of F=0.14 is described in the attachment to this letter, which includes a review of public comments received on the draft guidance. The 0.14 F factor may not be used beyond the 2018 model year.

The equation using the F factor is described in 40 CFR 600.510-12(j)(2)(vi) as follows:

[1] Although the regulations prescribe use of notice-and-comment procedures, EPA's determination is a factual adjudication of an appropriate F factor of appropriate duration.

where $CREE_{alt}$ is the CREE value calculated for the model type using the alternative fuel (in this case E85) and $CREE_{gas}$ is the CREE value calculated for the model type while operating on gasoline. For example, for an FFV emitting 330 g/mi CREE when tested on E85 and 350 g/mile CREE when tested on conventional gasoline, the CREE value for the FFV model type that would be used in the fleet average calculations under 600.510-12 would be calculated as follows:

There are several important things to note for manufacturers electing to use this F value:

1. Do not apply a factor of 0.15 to the E85 CREE value before combining with the gasoline CREE value. The requirements to use a multiplier of 0.15 for purposes of the greenhouse gas emissions standards extend only through the 2015 model year (see 40 CFR 600.510-12(j)(2)(iv) and (vi)).
2. Manufacturers electing to use this F value must apply it to all of the gasoline-E85 FFVs in its fleet for a given model year, regardless of the relative E85 and gasoline emission values. In other words, this value may not be used solely on FFVs where the E85 CREE value is lower than the gasoline CREE value.
3. Manufacturers may choose to use either F=0.14 or F=0 on a model year by model year basis, but both values may not be used within a single model year. For example, using F=0.14 for the 2016 model year does not prevent a manufacturer from using F=0 for 2017 model year vehicles, or vice versa.
4. Manufacturers continue to retain the option of collecting their own data demonstrating the real-world use of E85 to be generally applicable to the manufacturer's dual fuel fleet and requesting that EPA determine a unique F factor for the fleet, or for specific FFV model types and requesting that EPA determine a unique F factor for use in the equation for those model types (see 40 CFR 600.510-12(k)(2)).

If you have any questions about this guidance, please contact your certification team representative.

Attachment: Determination of Weighting Factor for Testing E85 Flexible Fuel Vehicles (FFV) for MYs 2016-2018 Vehicles Under the Light-duty Greenhouse Gas Emissions Program

VW FOIA, EPA 06/20/2017 2017-FFP_012895

ATTACHMENT

FINAL

Determination of Weighting Factor for Testing E85 Flexible Fuel Vehicles (FFV) for MYs 2016-2018 Vehicles Under the Light-duty Greenhouse Gas Emissions Program

June 2014

1. Introduction

This document provides the supporting analysis and rationale for the weighting factor being established by EPA under the light-duty vehicle greenhouse gas (GHG) program to be used to weight E85 flexible fuel vehicle (FFV) carbon dioxide ($CO_{2)}$ emissions when tested with both gasoline and E85 (a mixture of 85 percent ethanol and gasoline). EPA released a draft guidance document in March 2013, followed by an opportunity for public comment. The draft guidance included a weighting factor of 0.2. EPA is finalizing a weighting factor of 0.14 for MY 2016-2018 E85 flexible fuel vehicle (FFV) carbon dioxide ($CO_{2)}$ emissions for reasons discussed below.

The draft 0.2 weighting factor was based on an analysis using a wide range of future projections including the Renewable Fuel Standards (RFS) mid level ethanol case and U.S. Energy Information Administration release of Annual Energy Outlook 2013 (AEO 2013) ethanol volume scenarios considered by EPA, aggressive E15 use and no E15 use scenarios, and three FFV sales projection scenarios. This resulted in a combination of 12 different scenarios. The draft 0.2 factor represented an average value across this broad range of scenarios and was not based on any one primary scenario. EPA received 14 public comments including comments from representatives of the auto manufacturers, ethanol producers, and non-governmental organizations, as shown in the table below. After considering the comments and for reasons discussed below, EPA is finalizing a weighting factor of 0.14. The 0.14 weighting factor is based on a single scenario using total ethanol volume projections, ethanol blend scenarios, and FFV sales projections from the recently released Annual Energy Outlook 2014 (AEO 2014).[2]

List of Commenters

Alliance of Automobile Manufacturers (Alliance)	Growth Energy
American Council for an Energy-Efficient Economy (ACEEE)	Renewable Fuels Association (RFA)
American Lung Association (ALA)	American Coalition for Ethanol (ACE)
Union of Concerned Scientists (UCS)	National Corn Growers Association (NCGA)
The International Council on Clean Transportation (ICCT)	Illinois Renewable Fuels Association
BP	Algenol Biofuels
Biotechnology Industry Association	3S Environmental And Energy Strategies

Beginning in model year (MY) 2016, EPA's light-duty vehicle GHG program no longer allows FFV credits , but instead the GHG compliance values of an FFV must be based on actual emissions performance of the FFV on both gasoline and the alternative fuel, weighted by the EPA's assessment of the actual use of these fuels by the FFV. EPA is establishing this factor at a level of 0.14 for MY 2016-2018, based on EPA's assessment of the projected average real world use of E85 over the lifetime of MY 2016 FFVs. The weighted CO_2 emissions level will be

[2] http://www.eia.gov/forecasts/aeo/

VW FOIA, EPA 06/20/2017 2017-FFP_012897

used as the certification CO_2 level for individual MY 2016-2018 FFV models in determining the overall fleet average CO_2 emissions for the manufacturer's MY 2016 fleet. This means EPA is projecting that 14 percent of a MY 2016-2018 FFV's lifetime miles driven will be fueled on E85 and 86 percent will be fueled on conventional gasoline. EPA is determining this weighting factor upon written request from auto manufacturers per the regulatory provisions contained in 40 CFR Part 86 600.510-12(k)(1). These regulatory provisions were established as part of the rulemaking setting GHG and corporate average fuel economy (CAFE) standards for MY 2012-2016 light-duty vehicles.[3] As discussed below, manufacturers may not use the 0.14 weighting factor beyond MY 2018. EPA plans in the next few years.to issue subsequent guidance to establish an F factor for MY 2019 and later based on updated information
Section 2 of this document provides background information on how FFVs are treated in MYs 2012-2015, why EPA is establishing the weighting factor for MY 2016-2018, and how it will be used in determining FFV CO_2 emissions levels for these model years. Section 2 also briefly discusses EPA's plans for establishing weighting factors for MY 2019 and later. Section 3 provides a comparison of EPA's approach under the GHG program for MYs 2016 and later with that of the CAFE program for MY 2016 and later. Section 4 provides the analysis on which EPA is basing the 0.14 weighting factor, including a review of public comments.

2. Treatment of Flexible Fueled Vehicles under the EPA Model Year 2012-2016 LD GHG Rule

2.1. Background on Model Years 2012-2015

As discussed in the MY 2012-2016 Final Rule, EPA allows FFV compliance values corresponding to the compliance values allowed by CAFE during the period from MYs 2012 to 2015. These are commonly called FFV credits. Several manufacturers had already taken the availability of FFV credits into account in their near-term planning for CAFE and this reliance needed to be considered in assessing necessary lead time for the CO_2 standards. Manufacturers commented during the rulemaking that the credits are necessary in allowing them to transition to the new standards. EPA thus allowed these credits, in the near term, helping to provide adequate lead time for manufacturers to implement the new multi-year standards. This also helps to harmonize the GHG and the CAFE programs during these interim years.[4]

As under CAFE as required by EPCA,[5] EPA bases MY 2012-2015 FFV CO_2 emissions on a 50/50 weighting of the measured CO_2 emissions when the vehicle is tested on gasoline and with E85. This approach essentially assumes that over the life of the FFV, 50% of their operation is on the alternative fuel and 50% of the operation is on conventional fuel, resulting in CO_2

[3] 75 FR 25342, 25432-25434 (May 7, 2010). The tailpipe GHG emissions used for compliance with the CO_2 standards described in 40 CFR 86.1818 are the carbon-containing emissions (generally, CO_2, hydrocarbons, and carbon monoxide), which are summed based on the carbon weight fraction of each component into a value described in the regulations as the "carbon-related exhaust emissions" (CREE). For simplicity, however, in this support document, we are using the term CO_2 instead of CREE, as CO_2 is more broadly understandable and makes up the vast majority of the total carbon emissions from vehicles. [should this say tailpipe emissions?]
[4] See 75 FR 25432 (May 7, 2010).
[5] 49 U.S.C 32905 (b).

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emissions that are based on an arithmetic average of alternative fuel and conventional fuel CO_2 emissions. In addition, the measured CO_2 emissions on the alternative fuel are multiplied by a 0.15 volumetric conversion factor. Through this mechanism a gallon of alternative fuel is deemed to contain 0.15 gallons of fuel. For example, for a flexible-fuel vehicle that emitted 330 g/mi CO_2 operating on E85 and 350 g/mi CO_2 operating on gasoline, the resulting CO_2 level to be used in the manufacturer's fleet average calculation would be:

$$CO_2 = \frac{[(330 \times 0.15) + 350]}{2} = 199.8 g/mi$$

For MYs 2012-2015, EPA also established FFV credit limits or caps equivalent to the credit caps established for CAFE under EPCA/EISA. The FFV credit caps for CAFE are 1.2 mpg for model years 2012-2014 and 1.0 mpg for model year 2015.[6] The CO_2 FFV credits limits for MY 2012-2015 are based on a manufacturer's fleet-average performance.

Both the 50/50 weighting and the use of the 0.15 volumetric conversion factor were an established part of the CAFE program prior to the MY 2012-2016 rulemaking. EPA understands that by using the CAFE approach -- including the 0.15 factor -- the CO_2 emissions value for the vehicle is calculated to be significantly lower than it actually would be otherwise, even if the vehicle were assumed to operate on the alternative fuel at all times. This represents a "credit" being provided to FFVs for MYs 2012-2015.

In the MY 2012-2016 rule, for the longer term, EPA determined that there is adequate lead time to meet GHG standards without the use of FFV credits. Therefore, beginning in MY2016, the FFV credits as described above for MY2012-2015 (that is the assumed 50/50 usage of the gasoline/E85 and 0.15 factor described above) are no longer available for EPA's GHG program. Rather, GHG compliance values will be based on actual emissions performance of the FFV on conventional and alternative fuels, weighted by the EPA's assessment of the actual use of these fuels in the FFVs. The approach for MY 2016 and later is discussed in further detail below.

2.2. Background on MY 2016 and Later

For MY 2016 and later model years, EPA's program treats FFVs similarly to conventional fueled vehicles in that FFV emissions will be based on measured CO_2 results from emissions testing on the fuels on which it operates. Also, in calculating the emissions performance of an FFV, manufacturers may base FFV emissions on vehicle testing based on the alternative fuel emissions if there is a demonstration that the alternative fuel is likely to actually be used in the vehicles. The default absent such a demonstration is that performance will be calculated assuming use only of conventional fuel. The manufacturer must estimate the ratio of operation that will be on the alternative fuel compared to the conventional fuel. As shown in the equation below, the ratio (F) will be used to weight the CO_2 emissions performance over the 2-cycle tests on the two fuels. The 0.15 conversion factor (discussed in previous section) will no longer be included in the CO_2 emissions calculation.

[6] 49 U.S.C 32906 (a).

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$CO_2 = F \times CO_{2\,E85} + (1\text{-}F) \times CO_{2\,E0}$

For example, for an FFV emitting 330 g/mi CO_2 when tested on E85 and 350 g/mile CO_2 when tested on conventional gasoline, with an estimated vehicle miles travelled (VMT) split of 14 percent on E85 and 86 percent on gasoline, the CO_2 emissions for the FFV would be calculated as follows:

$$CO_2 = (0.14 \times 330) + (0.86 \times 350) = 347 \text{ g/mi}$$

One option EPA finalized in the MY 2012-2016 rule is for EPA to establish the weighting factor based on a national average approach considering national E85 fuel use. The MY 2012-2016 final rule provided that upon a manufacturer's written request, EPA "will determine and publish by written guidance an appropriate value of F for each requested alternative fuel based on the Administrator's assessment of real-world use of the alternative fuel," where F is the weighting factor to be used to weight the CO_2 emissions of the FFV on gasoline and on the alternative fuel (a value of 0.14 in the above example).[7] Manufacturers could then use the EPA-determined value along with their vehicle emissions test results demonstrating emissions on E85, which are typically lower, to determine the emissions compliance values for FFVs.

The preamble to the MY 2012-2016 proposal and final rule discussed an approach where EPA would conduct an analysis of vehicle miles travelled (VMT) by year for all FFVs using its emissions inventory MOVES model.[8] Using the VMT ratios and the overall E85 sales, E85 usage would be assigned to each vehicle. This method accounts for the VMT of new FFVs and FFVs already in the existing fleet using VMT data in the model and the EPA model would be used to determine the ratio of E85 and gasoline for new vehicles being sold. EPA noted that fluctuations in E85 sales and FFV sales would be taken into account to adjust the manufacturers' E85 actual use estimates annually. EPA also noted that it planned to make the assigned fuel usage factor available through guidance prior to the start of MY 2016 and adjust it as necessary.

In lieu of using EPA's estimated fuel usage factor based on the national average analysis, manufacturers have a second option of presenting their own data for consideration as the basis for evaluating fuel usage. As specified in the regulations, "the manufacturer may optionally submit to the Administrator its own demonstration regarding the real-world use of the alternative fuel in their own vehicles and its own estimate of the appropriate value of F."[9] Manufacturers must present a statistical analysis of alternative fuel usage data collected on actual vehicle operation. EPA did not attempt to specify how the data is collected or the amount of data needed. However, the analysis must be based on sound statistical methodology. Uncertainty in the analysis must be accounted for in a way that provides reasonable certainty that the program does not result in loss of emissions reductions.[10]

It is important to note that although the FFV weighting factor is needed prior to the end of MY 2016 so that manufacturers may include it in their CO_2 fleet average calculations, the F factor

[7] 40 CFR §86 600.510-12(k)(1).
[8] 74 FR 49454, 49532 (September 28, 2009) and 75 FR 25434 (May 7, 2010).
[9] 40 CFR §86 600.510-12(k)(2).
[10] 75 FR 25434 (May 7, 2010).

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must be based on the projected use of the alternative fuel over the life of the MY 2016 vehicles. In a situation where the amount of alternative fuel being used and the sales of FFVs were stable, EPA could potentially base the weighting factor on an estimate of what the factor is for vehicles in-use today. Based on current limited usage of E85, the F factor would be near zero. However, both the amount of ethanol being used and the sales of FFVs are currently in a state of considerable change. Under the Renewable Fuel Standard (RFS) program, the amount of ethanol to be consumed is projected to increase significantly over the next several years. Also, the production of FFVs has increased steadily over the last several years and we expect some continued growth in sales. There is currently a great deal of uncertainty both in the amount of E85 that is likely to be consumed year by year and the number of FFVs that will be sold. For the draft guidance, to address this uncertainty for both FFV sales and E85 volumes, EPA evaluated a range of scenarios for both FFV sales and E85 volumes on which to base the weighting factor rather than a single or primary scenario. For this final guidance, EPA is basing the F factor primarily on AEO 2014 projections, as discussed in Section 4 below.

The MY 2012-2016 rule discussed an approach where EPA would determine the weighting factor prior to the beginning of MY 2016 (which begins on January 2, 2015) and adjust it annually as necessary.[11] In the MY 2017-2025 rule, automakers submitted comments requesting early guidance on the F factor so that automakers would have the relevant information needed for development of compliance plans. EPA believes that it is important to establish the weighting factor through MY 2018 now to provide manufacturers with as much lead time and certainty as possible for planning for MYs 2016-2018. In the MY 2017-2025 final rule, EPA reiterated its commitment to issue early guidance "well in advance" of each model year.[12] As discussed below, EPA plans to revisit the weighting factor for MY 2019. The 0.14 F factor may not be used beyond MY 2018.

2.3. Potential Impact of the Weighting Factor

The table below provides CO_2 results for a sample of MY 2013 FFV models. In many cases, CO_2 levels on E85 are in the range of 2 to 7 percent better than on conventional gasoline and it would be to the manufacturer's advantage to weight in the lower emissions of the E85 operation.[13] For vehicles with CO_2 emissions in the 200-300 g/mile range and achieving a 5 to 10 percent benefit on E85 (assuming manufacturers optimize CO_2 performance on E85) compared to conventional gasoline, using an E85 weighting factor of 0.14 would lower the vehicle's CO_2 level by about 1-4 g/mile, depending on the vehicle's CO_2 levels.

[11] 75 FR 25434 (May 7, 2010).
[12] 77 FR 62624, 62830 (October 15, 2012).
[13] Lower g/mile emissions on E85 are attributable to a number of factors, including the chemical makeup of the fuel and the efficiency of the engine while operating on this fuel.

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CO_2 Emissions on Gasoline and E85 for Selected Model Year 2013 Vehicles[14]						
			CO2		Difference	
Make	Model	Engine/Trans	Gasoline	E85	g/mi	%
Chrysler	200	6 cyl 3.6L Auto	304.8	295.6	9.2	3%
Chrysler	300	6 cyl 3.6L Auto	296.9	287.3	9.6	3%
Chrysler	Town & Country	6 cyl 3.6L Auto	349.4	351	-1.6	-0%
Chrysler	Durango 4WD	6 cyl 3.6L Auto	374	354.8	19.2	5%
Chrysler	RAM 1500 4WD	8 cyl 4.7L Auto	491.2	454.6	-36.6	-7%
Ford	E150 Van FFV	8 cyl 4.6L Auto	477.3	457.2	20.1	4%
Ford	E350 Van FFV	8 cyl 5.4L Auto	543.1	521.5	21.6	4%
Ford	F150 Pickup 2WD FFV	6 cyl 3.7L Auto	360.6	343.9	16.7	5%
Ford	Focus SFE FWD FFV	4 cyl 2.0L Auto	204.5	207.8	-3.3	-2%
Ford	Explorer FFV 2WD	6 cyl 3.7L Auto	340.4	326.2	14.2	4%
GM	Buick LaCrosse	6 cyl 3.6L Auto	332	323.6	8.4	3%
GM	C15 Silverado 2D	8 cyl 5.3L Auto	406.1	383.1	23	6%
GM	Impala	6 cyl 3.6L Auto	314.2	293	21.2	7%
GM	K1500 Yukon Denali AWD	8 cyl 6.2L Auto	431.9	424.1	7.8	2%

As the data above indicate, there is a range of CO_2 performance on E85 compared to gasoline, and in a few cases FFV CO_2 emissions are worse on E85. Currently, because credits are calculated using a 0.15 factor (E85 CO_2 levels are multiplied by 0.15 in the calculation) and total credits are capped, there is not an incentive for manufacturers to optimize CO_2 emissions performance on E85. EPA believes that its approach for MY 2016 and later provides manufacturers with an incentive to optimize FFV emissions performance not only on gasoline but also on the alternative fuel. EPA also notes that manufacturers choosing to use a weighting factor in a given model year must use that weighting factor for the alternative fuel for all of their FFVs including any that have worse emissions performance on E85. Otherwise, the default is to base FFV emissions only on conventional gasoline.

3. Comparison with CAFE Program Treatment of Flexible Fueled Vehicles for MY 2016 and Later

49 U.S.C. section 32905 specifies how the fuel economy of dual fuel vehicles, including E85 FFVs, is to be calculated for the purposes of CAFE through the 2019 model year. In MY 2016 and later under CAFE, manufacturers continue to calculate credits using a 50/50 harmonic average of the fuel economy for the alternative fuel and the conventional fuel, irrespective of actual usage of each fuel. In addition, the fuel economy value for the alternative fuel continues to be significantly increased by dividing it by 0.15.

14

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In addition, as required by 49 U.S.C. 32906, CAFE continues to include a cap on the increase in fleet average mpg from FFV credits for MYs 2016-2019, which decreases each year as shown in the table below. The cap applies separately for domestic passenger cars, import passenger cars, and light-duty trucks.

Model Year	Credit Cap (mpg)
2016	0.8
2017	0.6
2018	0.4
2019	0.2

In the MY 2017-2025 CAFE rulemaking, a new approach for FFVs was established for model years 2020 and later.[15] After MY 2019, CAFE will weight the FFV fuel economy on conventional gasoline and E85 in its harmonic average of the two values using the same real world weighting factor F that is used by manufacturers under the EPA program (rather than assuming a 50/50 weighting). This F factor would either be established by EPA or by the manufacturer under the process options described above (or zero if no factor is established). Weighting the fuel economy to better reflect real world usage is a major change from the approach mandated by 49 U.S.C. 32905 and it orients the calculation more to the real world impact on petroleum usage, consistent with the statute's overarching purpose of petroleum conservation. The CAFE program retains the 0.15 divisor for MYs 2020 and later, whereas the GHG program does not include the 0.15 factor. Retaining the 0.15 divisor in CAFE for dual fuel vehicles is consistent with the procedures established by Congress for dedicated alternative fuel vehicles. As with the EPA program, there is no credit cap in the CAFE program for MY 2020 and later under this new approach finalized in the MY 2017-2025 rule.

EPA received comments from ICCT and ACEEE that an F factor of 0.2 could lead to very high uncapped credits under the CAFE program. The commenters are concerned that if the F factor is not based on actual use of the fuel, it could detract substantially from the efficacy of CAFE. While the F factor guidance would not apply to 2020 and later model years, the commenters are concerned about the implications of the precedent being set in the initial guidance. ACEEE noted that if an F factor of 0.2 is used in MY 2020, the CAFE credits for a vehicle with CO_2 levels of 200-300 g/mile would be in the range of 5.5 to 8.2 g/mile. EPA understands these concerns and reiterates that the F factor being established in this guidance will only apply to EPA's GHG program through MY 2018 and will not impact the CAFE program. An F factor established by EPA for MY 2019 and later will require future agency action that will include an opportunity for public comment. EPA does not view the guidance for MYs 2016-2018 as precedent setting. Determining an F factor is a fact-specific process, to be re-determined based on the facts available at the time EPA issues guidance. EPA will rigorously analyze available data concerning the trends in E85 fuel use and FFV sales in establishing an F factor for those later model years.

[15] 77 FR 62830-62831 and 63127-63130 (October 15, 2012).

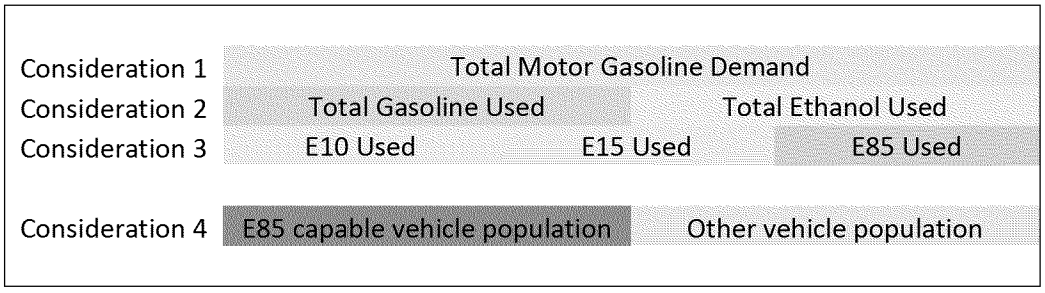
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4. Analysis of E85 F Factor for MY 2016 Vehicles

4.1. Analytic Methods

There is significant uncertainty regarding projecting future ethanol use and FFV sales over the lifetime of MY 2016 vehicles. Thus, for the draft guidance we analyzed several possible scenarios. We considered four different factors in estimating national average consumption of E85 by FFVs. These factors (Figure 1) are (a) the total motor gasoline demand, (b) the total volume of ethanol, (c) the form of the ethanol-gasoline blend distributed to the consumer, and (d) the number of vehicles which consume the E85. These factors interact; as an example, both the number of FFVs and the volume of ethanol determine how much E85 is produced and sold.

Figure 1 – Factors in E85 Demand



There is uncertainty about each of these future projections. With regard to ethanol, the US market has reached the "E10 blend wall" or the point at which ethanol blends above E10 would be necessary to absorb the quantity of ethanol needed to meet the statutory volume levels in the RFS program. Projecting the future volumes of different ethanol blends higher than E10 is uncertain.[16] On the vehicle side, there is significant uncertainty with regard to the continued production rates of flex fueled vehicles.[17] These complexities and considerations are discussed in the following sections.

... For the draft guidance, to compensate for this uncertainty, rather than focusing on a single scenario, EPA evaluated a range of scenarios that bracketed the possible outcomes. The remaining sections discuss inputs and present analysis for the twelve different scenarios used for the draft guidance, the public comments on those scenarios, and EPA's approach for the final guidance. For the draft guidance we analyzed two assumptions about the total quantity of ethanol, two assumptions about the different ethanol-gasoline blends, and three assumptions regarding future FFV sales. As explained in detail below, after considering comments and the current ethanol market under EPA's RFS program, EPA is basing the final F factor for MYs 2016-2018 on AEO 2014 projections for total ethanol volume, ethanol blend, and FFV sales projections. Model Framework

This analysis was conducted using an updated version of the OMEGA model used in the MY

[16] For a discussion of the different combinations of E10, E15, and E85 that might result from the RFS volume requirements see the RFS2 final rule at 75 FR 14760-14763 (March 26, 2010).

[17] Of note, this analysis uses FFV production volume as an input, and outputs an expected E85 usage fraction. This fraction, through the resulting vehicle credit, in turn circularly influences the FFV production volume.

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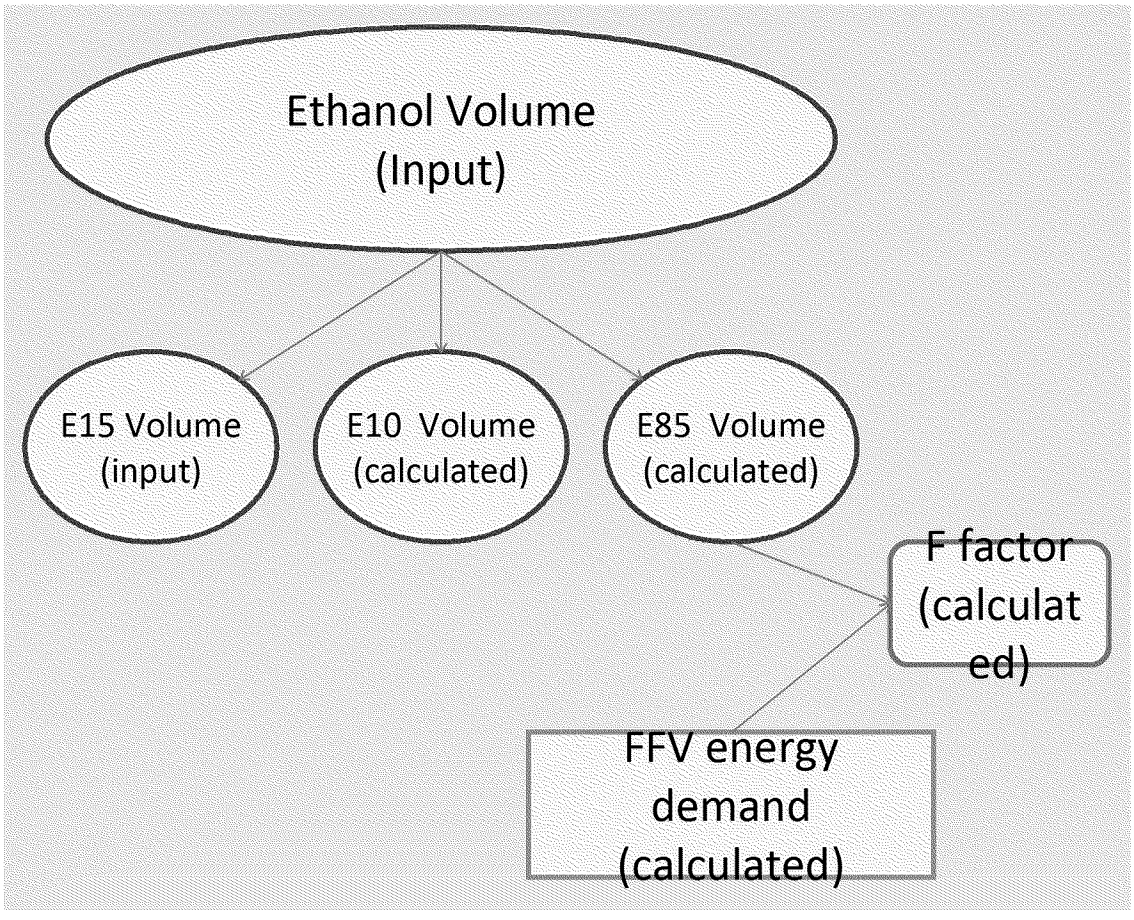
2017-2025 LD GHG rulemaking. The OMEGA benefits post processor spreadsheet (version 1.4.1)[18] was extended to conduct the fuel volume calculations needed for this analysis.[19] For this analysis, we also normalized the light duty energy demand (consideration 1 above) to the motor gasoline (including E85) demand presented in the Energy Information Administration's (EIA's) Annual Energy Outlook (AEO), hereafter called AEO 2014.[20] Thus, the population and VMT models in OMEGA are used to determine the allocation of energy between vehicle MYs, but not the overall amount of energy. Other than these changes, the inputs are either identical to those used in the rulemaking, or as described in the next sections. For this analysis, the LDGHG 2017-2025 rulemaking's scenario of the MY2010 base fleet was used.

In the basic calculation of the F factor, the OMEGA model is given inputs as to the total number of FFVs sold each year, the total amount of ethanol used in each calendar year, and assumptions about E10/E15 usage. In the calculation, total energy, total ethanol, and E15 volumes are fixed as inputs, while the E10 and E85 volumes float in order to absorb the total ethanol volume (Figure 2). The model is used to calculate the total gallons of E85 required to consume the input ethanol quantity, and the fraction of miles the FFVs would need to run on ethanol in order to consume that fuel. This fraction is the "F factor" described above.

[18] OMEGA Model v1.4.1 (http://www.epa.gov/omswww/climate/models.htm).
[19] http://www.epa.gov/otaq/regs/ld-hwy/greenhouse/ld-ghg.htm.
[20] See Table 45 of AEO 2014 for total energy volumes and Table 17 of AEO 2014 for projected renewable volumes.

VW FOIA, EPA 06/20/2017 2017-FFP_012905

Figure 2 - Calculation Dynamics



In this calculation, we neglect the marginal change in FFV energy demand as a result of the change in fuels. While an increase in E85 usage could decrease the total energy demand of the FFVs, this effect is small, and is a secondary consideration in this calculation. This conservative assumption marginally biases the F factor to a lower number.

4.1.2. FFV Sales Projections

One of the difficulties in estimating the F factor is estimating the number of FFVs that will be sold in future years. As discussed below, there is a historic relationship between an incentive for FFV production (the CAFE credit) and the production of FFVs. However, we have no direct estimate of the relationship between the credit size and the production of FFVs, particularly in the context of a fleetwide standard that becomes increasingly stringent.

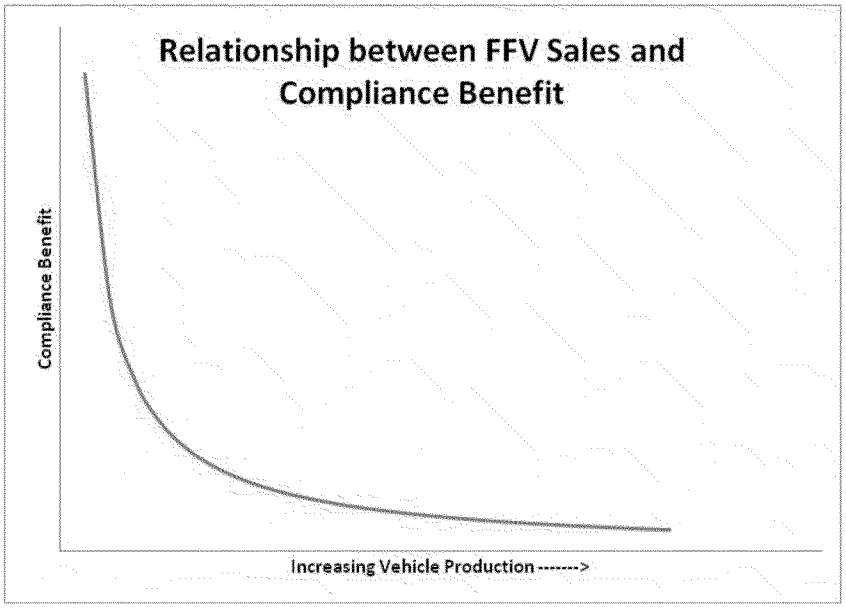
There is a likely equilibrium with regard to the compliance benefit for the manufacturer and the production of FFVs. There is a direct relationship between the F factor and the incentive for building FFVs, but an inverse relationship between number of FFVs sold and the F factor. With a fixed pool of ethanol, additional FFV sales decrease the value of the F factor per vehicle, as the additional vehicles reduce the amount of E85 that each individual vehicle will consume (Figure 3). Thus, at some level of sales and stringency, the cost for producing an FFV will be greater than the value received for producing it. In the absence of other factors, manufacturers are

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unlikely to build FFVs if the increased production costs exceed the compliance benefit.

Equation 1: Compliance Benefit $\propto$ Gallons of E85 / FFV population

Figure 3 – Relationship of FFV Sales and Compliance Benefit (Constant Ethanol Volume)



With these guiding concepts, we evaluated a range of FFV production forecasts.

4.1.2.1. Existing Projections

With regard to existing projections of FFV production, we are aware only of the Department of Energy / Energy Information Administration (EIA) projections of FFV sales. EIA projects FFVs as approximately 8% of light duty sales between 2012 and 2030[21] in AEO 2013 and revised this projection to 11% in AEO 2014.[22] These sales projections are based on assumptions regarding the CAFE credit value. EPA did not use EIA's projections of FFV sales for the draft guidance but is using them for the final guidance, as discussed below.

4.1.2.2. Historic FFV Sales Rates

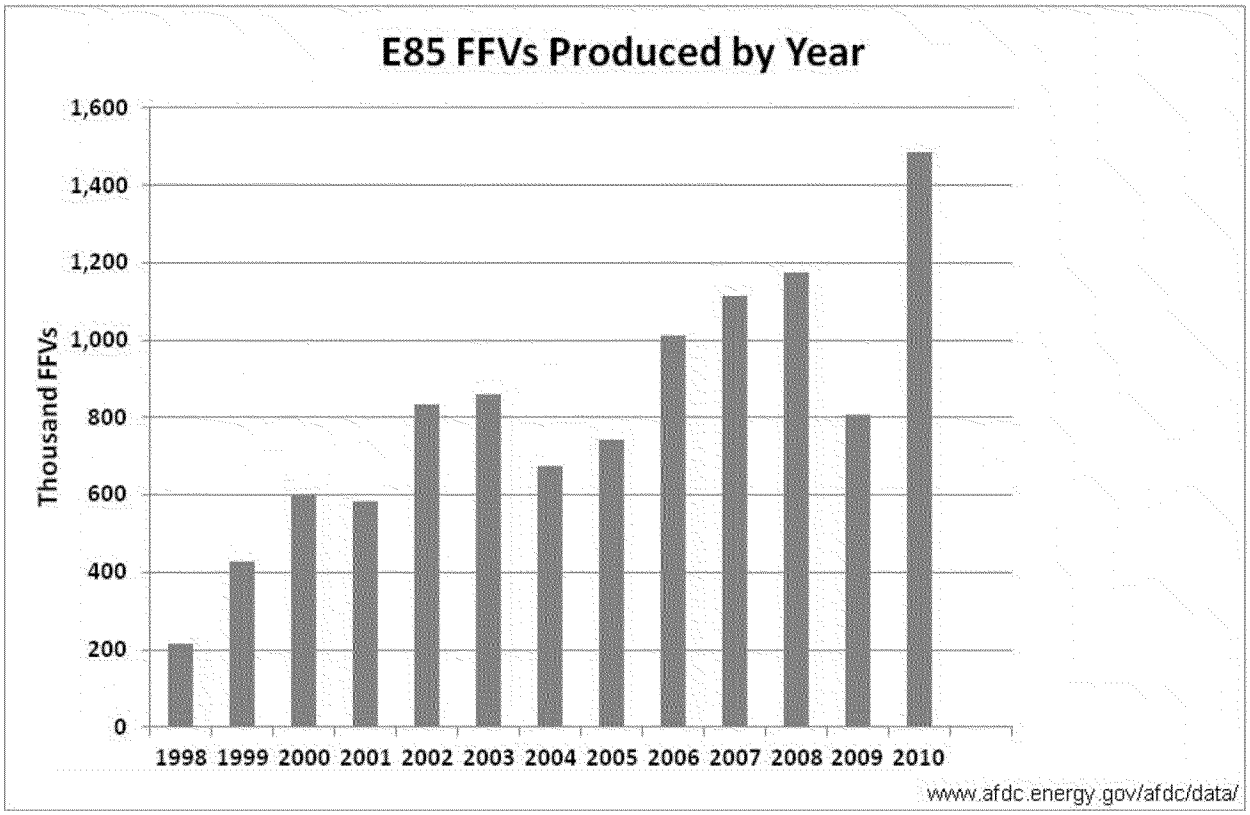
For the draft analysis, EPA projected that FFV sales would grow over time until leveling off in 2020. Several elements fed into the projections of FFV production EPA used in its draft guidance. EPA considered historic FFV production and conversion volumes (Figure 4) which have grown over time.

Figure 4 – Historic FFV Production

[21]

[22] AEO 2014, Table 57. Light-duty Vehicle Sales by Technology Type.

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EPA also reviewed production data submitted by manufacturers as part of the annual certification and compliance process. In MY 2012, FFV production was dominated by General Motors, Ford, and Chrysler. While these three domestic manufacturers produced approximately 40% of their fleet as FFVs, US production as a whole was at 16%. As seen below (Table 1), other manufacturers do not produce significant total numbers of FFVs relative to their own fleet, or the nation as a whole. These sales results are very similar to the 2011 sales results, where FFV sales made up about 17% of overall vehicle sales.

Table 1 – MY 2012 FFV Production[23]			
Manufacturer	Units Produced	% Total US FFV Production	% Manufacturer LD Production
Chrysler	558,573	26%	36%
Ford	497,997	23%	28%
General Motors	1,031,257	48%	443%
Mercedes	21,385	1%	8%
Nissan	24,154	1%	2%
Toyota	31,670	2%	2%
Volkswagen	2,060	0.1%	0.4%
Fleet	2,167,096	100%	16%

EPA further examined the manufacturer vehicle production data to determine if the data supported particular projections of FFV sales. EPA attempted to identify a production cutpoint or other metric based on current data that could be applied across the fleet to determine a reasonable projection of potential future FFV sales. While the division of manufacturers between FFV producers and non-producers is clear, there is no such line amongst vehicle production. FFVs are applied in both high volume and low volume vehicles, and the same engine is frequently used in both FFV and non-FFV applications, sometimes in the same vehicle model. While FFVs production historically tended to be focused on light trucks, there are currently several passenger car models that are FFVs. EPA was not able to identify a production cut point or other metric that could be applied across the fleet to project potential future FFV sales. Manufacturer considerations beyond those discussed here are likely to drive future trends, however, these considerations likely differ by manufacturer and application.

4.1.2.3. FFV Sales Projections

Given the lack of clarity in industry trends for FFV production, we created three projections – lower FFV sales, mid FFV sales, and a higher FFV sales scenario for the draft guidance analysis. All three scenarios rise from the current sales level to a maximum sales fraction in MY 2020. The projected sales fractions used in the modeling for the draft guidance were 25%, 38%, and 50% by 2020. The projections assumed that incentives would be sufficient to induce manufacturers to continue to produce [24]larger volumes of FFVs into the future. We assumed that the manufacturer's desire to obtain the compliance benefit from use of FFV E85 emission values would increase as the fleetwide standard continues to increase in stringency.

[25]All commenters that provided comment on the FFV sales projections recommended that lower

[23] Greenhouse Gas Emission Standards for Light-duty Vehicles Manufacturer Performance Report for the 2012 Model Year, EPA-420-R-14-011, April 2014.

[24]

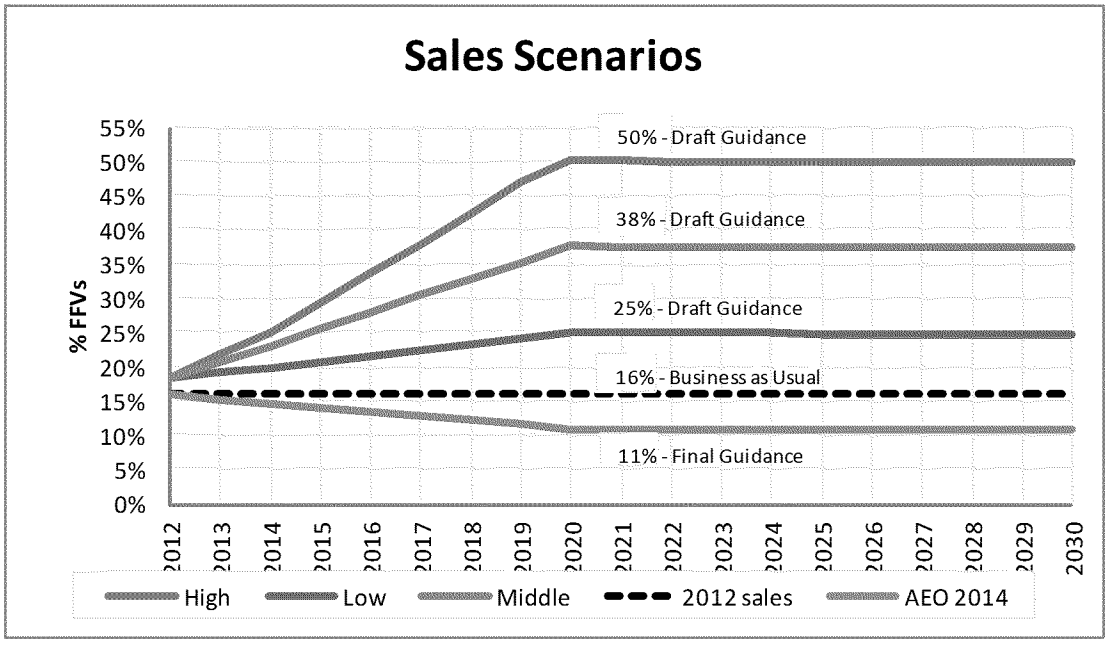
[25]

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sales projections should be used, noting that the benefit of producing FFVs is reduced significantly under the F factor approach compared to CAFE. The Alliance comments that the overall fleet benefit constitutes a greater than 95% reduction in FFV benefit in comparison to the CAFE calculation. This is on top of the extra technical difficulties which may be experienced in certifying new FFV concepts to emission standards other than GHG, especially in light of the higher level of highly boosted, downsized motors predicted for deployment by the industry in the future. Growth Energy commented that EPA's projections seem optimistic considering the sizable number of automobile manufacturers not currently producing FFVs under the current CAFE program which provides considerably more incentive compared to the F factor. Reformulated Fuels Association and other ethanol representatives similarly commented that lower sales projections should be used.

For the final guidance, EPA is using the AEO 2014 FFV production projection of 11 percent for 2020 and later. EPA reviewed the MY 2012 FFV production data which showed that FFV sales have declined in terms of percent of sales from 17% of sales in 2011 to 16% of sales in 2012. For the final guidance, EPA is using a projection of declining percent sales from 16% in 2012 to 11% in 2020 with sales remaining at 11% thereafter, consistent with AEO 2014. This approach is responsive to comments that EPA's draft projections were too high and consistent with the decline in percent of sales from 2011 to 2012. This approach is also consistent with using AEO projections for total ethanol volumes as fewer FFVs will be available to consume E85 under this lower ethanol scenario.

Figure 5- FFV Sales Scenarios



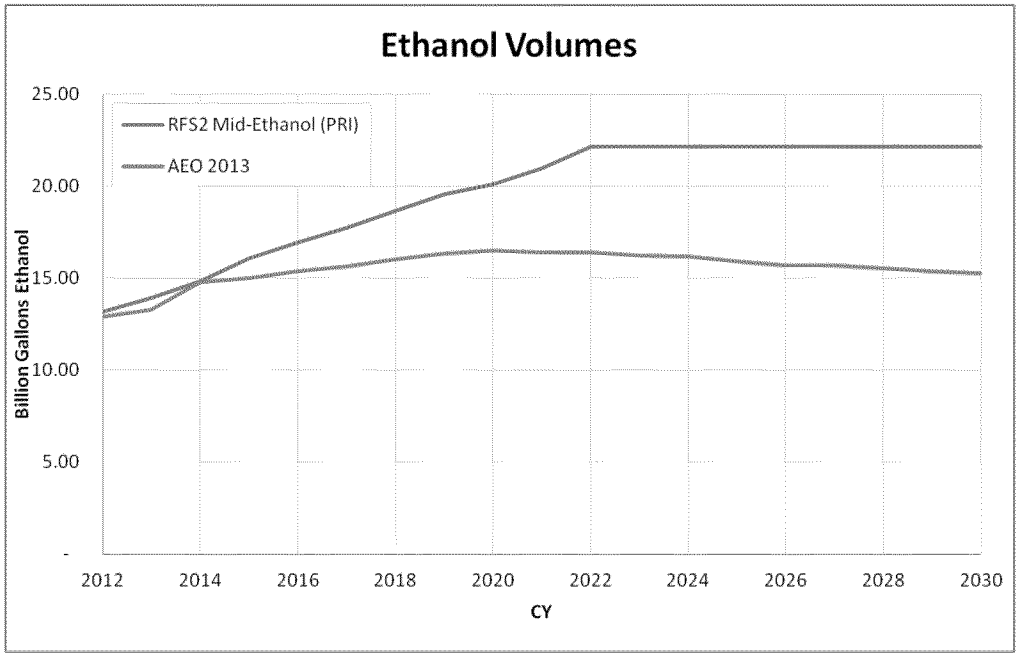
4.1.3. Total Ethanol Volume Projections

For the draft guidance, we considered two different total ethanol projections. In the first, the mid-

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ethanol case from the RFS2 rulemaking[26],[27] the full volume requirements of the RFS program are met in all years and the volume of ethanol used to meet those requirements (as opposed to other types of renewable fuel) are in the middle of the range of possible outcomes. In the second, we used the latest available EIA projection of ethanol production and use from AEO 2013ER for an alternate projection of future ethanol volume[28].[29] For the draft guidance, we considered these two scenarios reasonable bounds on the potential future volumes of ethanol.

Figure 6 – Ethanol Volume Projections Used in the Draft Guidance



EPA received diverse comments on what total ethanol volumes should be used in the analysis. The Alliance and ethanol industry commenters generally supported using higher ethanol volumes which would in turn would result a higher F factor. The Alliance commented that the AEO scenario should be dropped because RFS is required by law and manufacturers should not be penalized if other parties do not comply. Growth Energy and RFA also supported using high and mid-case RFS scenarios without including the AEO scenarios. The National Corn Growers Association, Illinois RFA and the American Coalition for Ethanol supported including multiple high and mid RFS cases rather than just the RFS mid case, along with the AEO scenario.

UCS commented that only the AEO scenario should be included. UCS commented that the RFS targets were aspirational and non-binding and that RFS targets will not be met through 2022. ICCT and ACEEE recommended that EPA not use projections as the basis for the F factor but

[26]

[27] Also known as the "Primary Control Case" in the RFS2 final rule. See 75 FR 14741 (March 26, 2010).

[28]

[29] See Table 11 of AEO 2013ER for projected ethanol volumes.

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that it should be based on historical fuel use. ICCT estimated that this approach would result in an F factor in the range of 0.01.

EPA is basing the final F factor exclusively on the AEO 2014 projections.[30] In the 2014 RFS proposed rule, EPA has for the first time proposed RFS ethanol volumes below those specified in the Energy Independence and Security Act of 2007 (EISA20007). As this indicates, the statutory volumes are not mandatory and EPA can waive the volumes partially based on reasonable projections of biofuel use. It is highly unlikely that the ethanol volumes specified in the statute will all be attainable in the time-frame envisioned. EPA is not prepared at this time to project future ethanol volumes or timing based on the volumes listed in the statutory language for the RFS program. Therefore, EPA is using the projections provided in AEO 2014 as the best projections currently available. The other option would be to postpone setting the F factor until additional data is available, which would negatively impact manufacturer lead-time and certainty. EPA believes that basing the F factor on historic fuel use would be too conservative because it does not account for any continued phase-in of the RFS program. The F factor is an estimate of fuel use over the life of MY 2016 vehicles and basing the F factor on historic use would not include any continued growth of ethanol volumes, whereas AEO 2014 does include a conservative estimate for continued growth taking into account RFS.

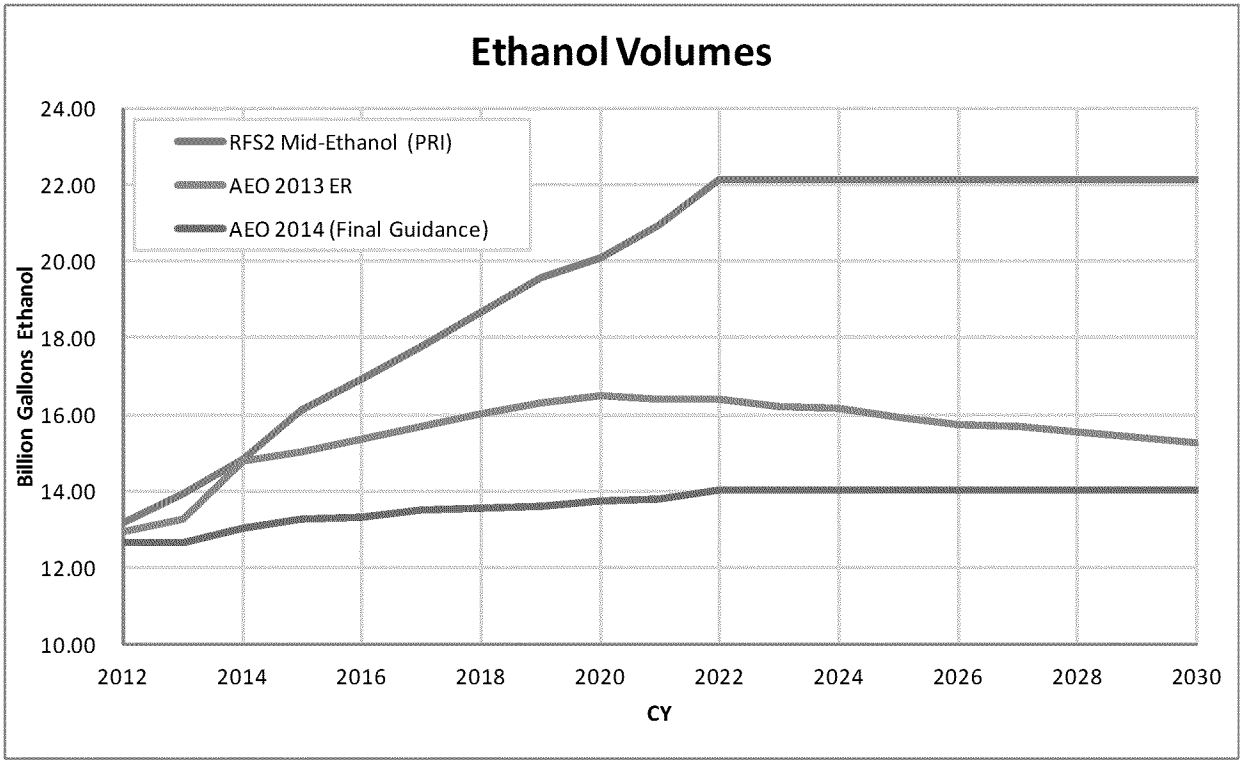
The AEO 2014 projections are based on EIA's best estimate of what will occur in the market. They are well below the EISA RFS levels as shown in the figure below. EIA attributes the shortfall largely to the decline in overall gasoline consumption as a result of increasingly stringent CAFE standards and updated projections of FFV sales.

EPA received comments from ICCT and UCS that drop-in fuels must be considered in projecting ethanol volumes. AEO 2014 includes projections for increased use of biobutanol and drop-in fuels, which is directionally responsive to these comments.[31]

[30] See Table 11 of AEO 2013ER for projected ethanol volumes.
[31] U.S. Energy Information Administration Annual Energy Outlook 2014, DOE/EIA-0383 (2014), April 2014, p. MT-29

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Figure 7 – Ethanol Volumes Including AEO 2014



Revise figure to add RFS 2014 level

4.1.4. Ethanol Use Scenarios

In addition to overall ethanol volume there is also uncertainty regarding how much ethanol may be consumed as E15. Currently, E15 is being consumed in very small volumes but it has been on the market for only a short time and availability is still very limited. For a specified volume of total ethanol, if E15 use grows significantly, the amount of ethanol consumed as E85 would necessarily decrease, thus resulting in a lower F factor. Therefore, the amount of E15 potentially consumed in the future is another significant point of uncertainty for EPA's analysis. In an attempt to bracket the potential ethanol use in the future, we considered two different allocations of ethanol for the draft guidance analysis: an aggressive E15 case, and a case that assumes no E15 usage, as shown in the figure below.

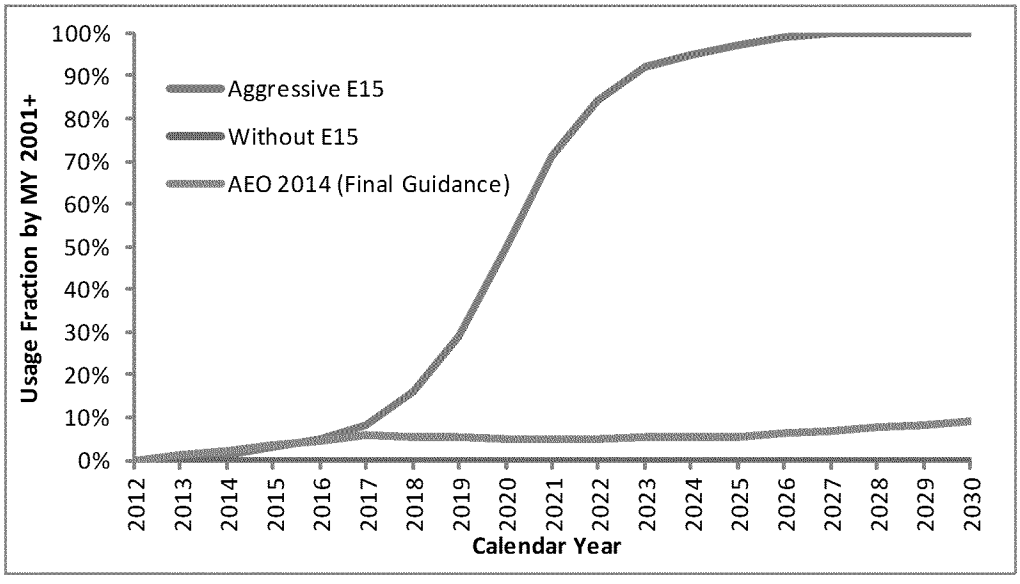
The aggressive E15 case assumed increased E15 use to 50% by 2020 (for MY2001+ non-FFV vehicles). Farther into the future, we assumed E15 use increased substantially for MY2001+ non-FFV vehicles, reaching a usage of 95% by 2025. Any remaining E10 in the fuel supply for this case is consumed almost entirely in non-road, marine and off-road vehicles and equipment. In the second case included in the draft guidance, E15 is not considered as a blend. Any ethanol beyond blending at an E10 level would be used in FFVs. We did not consider scenarios that include other ethanol blends, such as E30 use in FFVs for the purposes of this analysis.

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EPA received a range of comments on the E15 projections. Growth Energy, RFA, the National Corn Growers Association, and Illinois RFA commented that projected E15 use should not be included in the analysis. Growth Energy commented that all ethanol above E10 should be counted as E85 to give GHG credits to manufacturers for the use of the fuel. RFA commented that due to current issues and uncertainty regarding the use of E15, E15 scenarios should not be included. The Alliance did not comment against including both the no E15 and the E15 scenarios but did comment that the analysis should be updated to reflect actual E15 use when the F factor is updated in the future. UCS commented that the E15 scenarios should be retained and that EPA should consider increasing their weighting due to the potential for butanol, E30, and other biofuels that could reduce or even eliminate the potential sales of E85.

EPA has considered the above comments and is not including the aggressive E15 projections used in the draft guidance. EPA continues to believe that including an aggressive E15 scenario may have been appropriate if EPA were retaining the RFS ethanol volume scenarios as part of the analysis. With the higher total ethanol volumes it would be reasonable to include aggressive E15 projections as a potential mechanism for consuming these high ethanol levels, or as a surrogate for a variety of other potential fuels as suggested by UCS. However, EPA is only including AEO 2014 projected ethanol volumes which are significantly lower than the RFS mid-case total ethanol projections. AEO 2014 provides projections for E15 use which are coupled with AEO's overall lower ethanol use projections. The E15 levels are projected to stay below 10% through 2030, as shown in the figure below. For the final guidance analysis, EPA is using the E15 projections that are calculated from AEO 2014, as they are consistent with AEO's projected total ethanol levels.

Figure 8 – Projected E15 Usage Fraction



Revise as needed E15 graph

We assume that each gallon of E85 is 83% ethanol. While inconsistent with market practices,[32]

this assures alignment between the emissions test which relies on E85 certification fuel with 83% ethanol and the analytic assumptions made here. [We should have a sentence or two explaining why we are not treating E15 as E85, per Growth Energy's suggestion]

4.1.4.1. Infrastructure

The AEO 2014 projections assume that infrastructure issues will continue to be gradually resolved over time.[33] The number of blender pumps needed to meet AEO projections is much more in line with current infrastructure growth rates compared with the infrastructure needs estimated in the RFS2 final rule (at least 23,000 stations by 2022).[34] While the number of retail stations having blender pumps that dispense E85 would need to continue to increase[35], we believe that such increases are within the capabilities of the industry.

4.2. Limits of this Analysis

This analysis is limited by the quality of its input projections, where there is varying certainty about the inputs and some of the inputs are unlikely to occur in concert. As an example, a high ethanol volume scenario is unlikely to occur simultaneously with few FFV sales. Similarly, low ethanol volumes along with high FFV sales are also unlikely, since there would be insufficient E85 to fuel these vehicles, and little incentive to build them.

We also assume that the E85 consumption is an equivalent fraction of each MYs FFV fuel consumption during each calendar year. For example, in calendar year (CY) 2020, MY 2020 and MY2007 vehicles consume different amounts of energy (proportional to their VMT and efficiencies), but all onroad FFVs consume the same fraction of that energy as E85.

4.3. Results

The CY results are weighted by the survival weighted VMT accumulation rate of MY 2016 vehicles over the first 15 years of life (approximately 80-85% of projected lifetime driving depending on whether cars or trucks are considered).[36] Focusing on the first fifteen years (through 2030) is neither a clearly conservative or aggressive assumption, as it depends on the relationship between ethanol production and consumption in later years and earlier years. However, focusing on the first fifteen years allows us to limit the need to project the far future.

---

[32] Actual E85 average ethanol fraction is likely closer to 74%. See footnote 157 at 75 FR 14762 (March 26, 2010).

[33] U.S. Energy Information Administration Annual Energy Outlook 2014, DOE/EIA-0383 (2014), April 2014, p. MT-31.

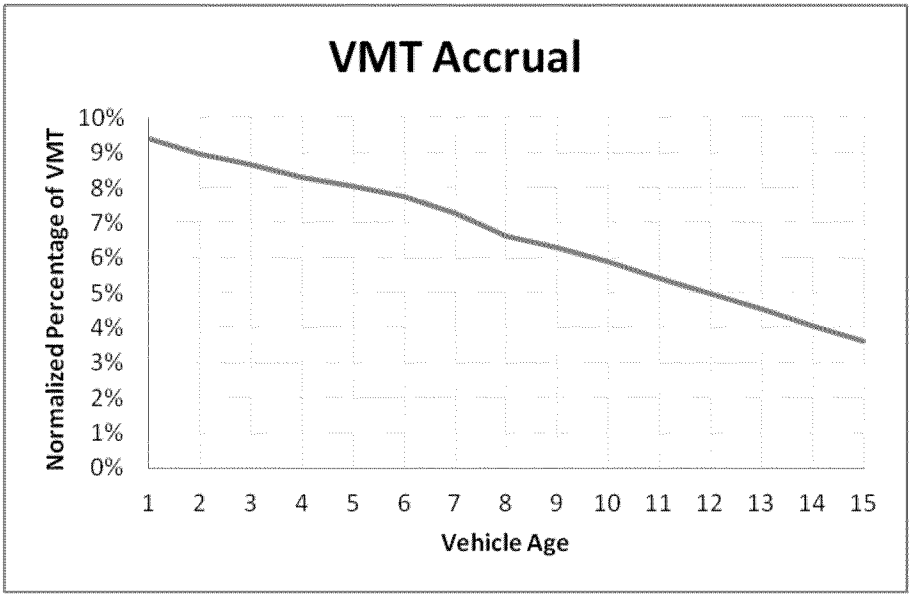
[34] See 75 FR 14758 – 14759 (March 26, 2010).

[35]

[36] EPA Final Rulemaking to Establish Light-DutyVehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards Regulatory Impact Analysis. http://www.epa.gov/omswww/climate/regulations/420r10009.pdf

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Figure 9 – VMT Weighting



For the draft guidance, we ran the OMEGA model using each combination of the assumptions above, and calculated an F factor for each CY. This F factor was weighted by the VMT accrual rate shown above (Figure 9), and calculated for each scenario [37](Table 2).[38] As a reminder, for the draft we looked at two different ethanol volume scenarios, two different ethanol usage scenarios, and three different sales scenarios leading to a total of twelve scenarios analyzed.

[37]

[38] The VMT accrual rate shown here is a production weighted mix of cars and trucks. While the VMT for cars and trucks differ, their relative accrual rates do not significantly differ, and for simplicity, a single rate is used.

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Table 2 – VMT Weighted MY 2016 F Factors

Draft Guidance				
	Ethanol Scenario	Use Scenario	Sales Scenario	F Factor
1	RFS2	E15	Higher	21%
2			Middle	25%
3			Lower	32%
4		No E15	Higher	32%
5			Middle	39%
6			Lower	49%
7	AEO2013ER	E15	Higher	6%
8			Middle	6%
9			Lower	7%
10		No E15	Higher	16%
11			Middle	19%
12			Lower	23%
Average	**--**	**--**	**--**	**23%**

Final Guidance				
	Ethanol Scenario	Use Scenario	Sales Scenario	F Factor
1	AEO 2014 (See Figure 7)	AEO 2014 (See Figure 8)	AEO 2014 (11%)	14%

For the draft guidance, rather than selecting one of the scenarios above as a primary analysis on which to base the MY 2016 F factor, EPA averaged all of the scenarios producing an F factor of 0.23. To be conservative on the side of environmental protection in light of the uncertainty in the analysis, EPA rounded this value down to 0.2 for MY 2016.

For the final guidance, EPA has based the F factor of 0.14 on a single scenario based on AEO 2014 projections for the reasons discussed above. Although lower than the draft F factor of 0.2, the 0.14 factor represents about a fourteen fold increase in the factor over time compared to current E85 usage rates. The F factor analysis was conducted for MY 2016 but EPA is allowing the 0.14 factor to be used for MYs 2017-2018 as well. EPA does not believe the value will change significantly in this time frame and wants to provide as much leadtime as possible to manufacturers.

EPA plans to revisit the weighting factor for MY 2019 and later. EPA will conduct a new analysis considering available data in establishing the value for MY 2019. In the draft guidance, EPA considered allowing the 0.2 F factor to be used through MY 2019 unless available data suggested a revision was needed sooner. However, EPA received comments that the F factor should be locked-in as far out as possible, and not be subject to review and possible revision, in

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order to provide manufacturers with as much certainty as possible. EPA understands these concerns and is locking in the 0.14 F factor for MYs 2016-2018. However, EPA is balancing the manufacturers' need for certainty with uncertainty regarding future ethanol use and FFV sales. Therefore, EPA believes that it is reasonable to revisit the F factor for the 2019 model year.

5. Comments Beyond the Scope of the Guidance Document

Several commenters submitted comments regarding the need to provide incentives for the sale of FFVs in support of the RFS program. EPA believes these comments are beyond the scope of the guidance document. In the MY 2012-2016 rule, EPA established regulations that moved away from non-performance based credits for FFVs to a system where credits are based on measured CO_2 performance weighted by estimated real-world use of those fuels. In the MY 2017-2025 rule, EPA received comments that FFVs should be provided additional incentives to encourage their production. EPA declined to make changes to the program during the MY 2017-2025 rule that would provide additional incentives for FFV production.[39] The policy question of whether or not FFV's should be provided with additional incentives was thus already addressed by both rulemakings.

This guidance document is narrow in scope and is being undertaken per the regulations established in the MY 2012-2016 rule that EPA "will determine and publish by written guidance an appropriate value of F for each requested alternative fuel based on the Administrator's assessment of real-world use of the alternative fuel" (see 40 CFR 600.510-12(k)(1)). Therefore, EPA believes that providing credits that go beyond those that can be justified based on the Administrator's assessment of real-world use of the alternative fuel is not allowed under the regulations. EPA does not believe that this guidance can be used as a vehicle to revisit the appropriateness of or introduce a pathway for providing additional incentives for FFV production.

6. Conclusion

EPA is establishing the E85 weighting factor to be used by manufacturers in weighting CO_2 emissions on E85 and conventional gasoline for purposes of FFV certification. The F factor is based on the assessment of real-world fuel use over the life of the average FFV. Because the factor represents a real world assessment of the E85 used by an FFV over its lifetime, EPA must base the F factor on projections of future ethanol use and FFV production. EPA is establishing an F factor on 0.14 for MYs 2016-2018 based on AEO 2014 projections for FFV sales, total ethanol use, and ethanol blends. The 0.14 factor may not be used beyond MY 2018. EPA will take action to establish F factors for MY 2019 and later based on a full review of updated information.

[39] 77 FR 62822-62824 (October 15, 2012).

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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7
From: Ex. 7
Sent: Wed 6/11/2014 1:47:58 PM
Subject: VW PHEV presentation
PHEV_Berechnungsvorlage_02.pptx

Good morning Jim,

Ex. 7 is out of the office this week and wanted me to send this updated PHEV presentation from our folks in Germany.
They would like to have a meeting with you (and possibly Rob?) next week to explain the details.
Do you have an hour or so for us to come see you (and Germany to be on the phone) early in the week?

Thanks very much,

Ex. 7

Ex. 7

Ex. 7

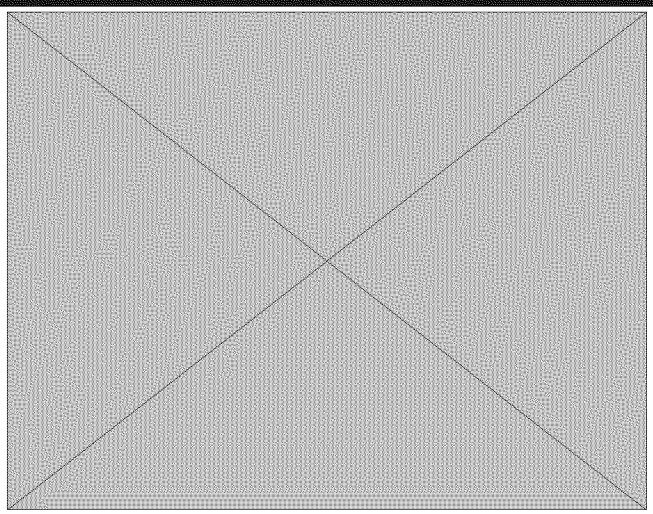
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From: DrivingtheNation.com newsletter
Sent: Wed 6/11/2014 8:57:09 PM
Subject: 6/11/14 - US-EPA cuts CO2, Chevy Corvette Conv,MINI Cooper DeLux, washingtonpost.com, list your used car for free

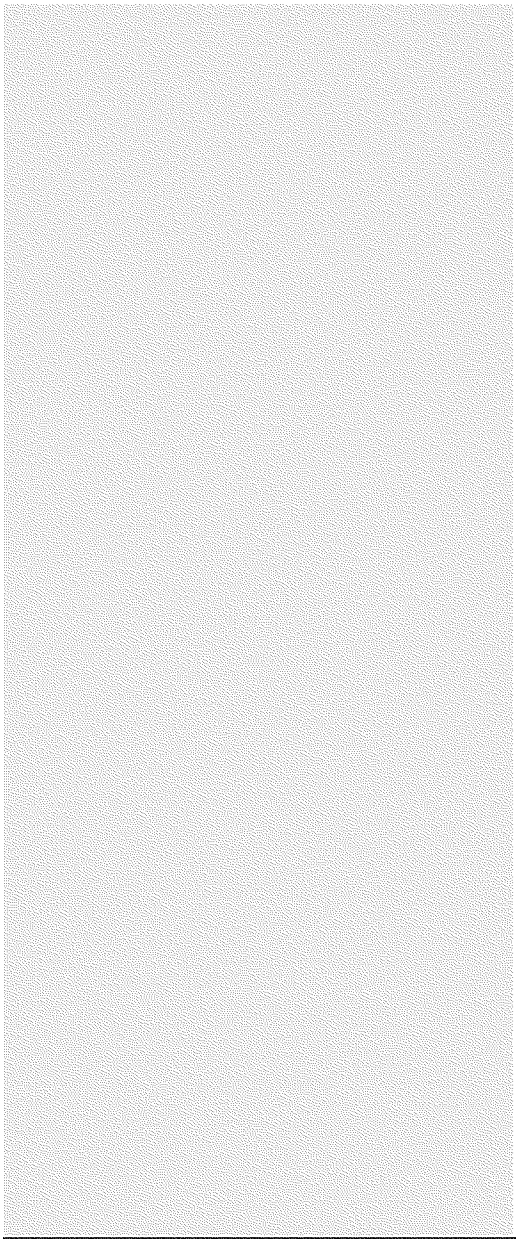
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- 2000 Volkswagen Eurovan gls

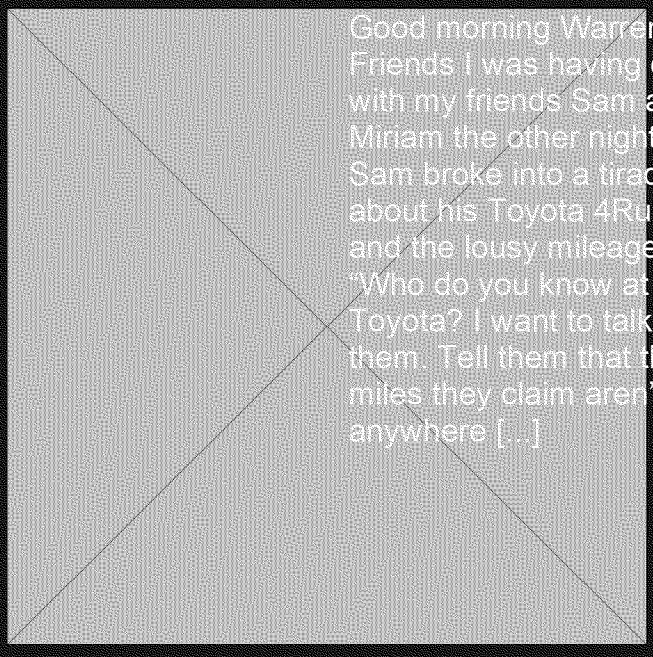
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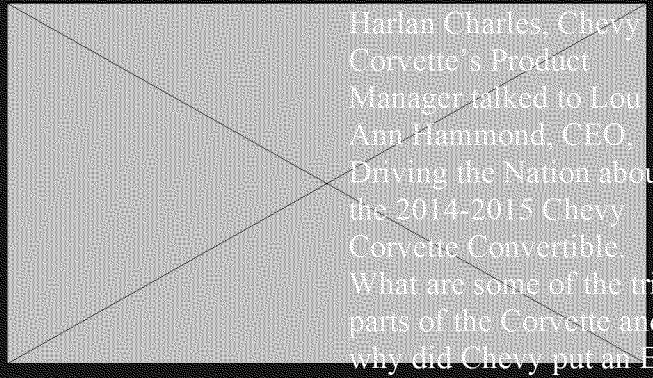
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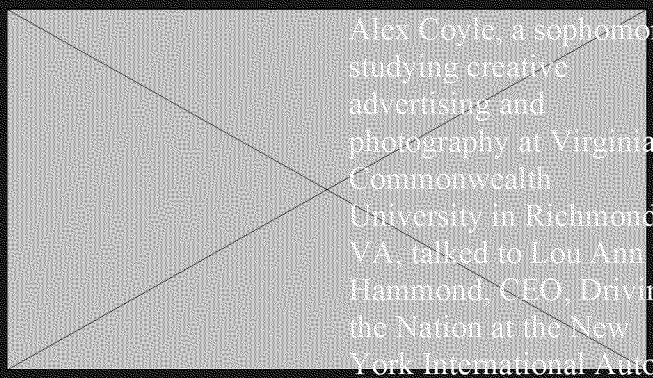
2014 Chevy Corvette – not in Eco mode on Driving the Nation



Harlan Charles, Chevy Corvette's Product Manager talked to Lou Ann Hammond, CEO, Driving the Nation about the 2014-2015 Chevy Corvette Convertible. What are some of the trick parts of the Corvette and why did Chevy put an Eco-mode in the first factory-built, ultra-high performance Corvette convertible? The 2015 Corvette Z06 convertible boasts 625 horsepower and [...]

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Alex Coyle's 2014 MINI Cooper Delux now on sale on Driving the Nation

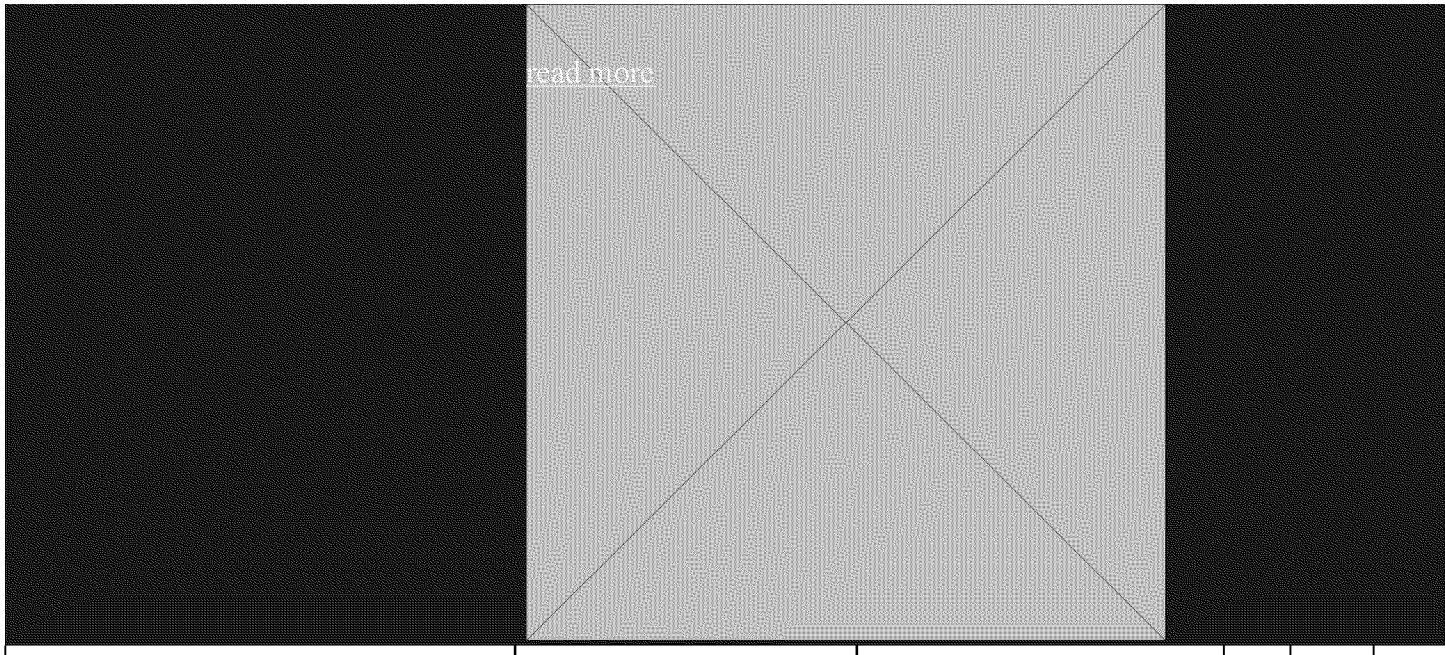


Alex Coyle, a sophomore studying creative advertising and photography at Virginia Commonwealth University in Richmond, VA, talked to Lou Ann Hammond, CEO, Driving the Nation at the New York International Auto Show about winning the MINI original design application. Coyle was inspired by light and designed her "MINI Originals" package to stand out at night [...]

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From: Charmley, William

Sent: Wed 6/11/2014 9:17:29 PM

Ex. 5

Dear all –

Ex. 5

I also attached the agenda for the Mexico workshop that EPA and ARB have been invited to for July from ICCT, which is part of agenda item #2

Thanks

Bill

From: Ex. 7 @ARB Ex. 7

Sent: Thursday, June 05, 2014 1:17 PM

To: Ex. 7 @arb.ca.gov; Ex. 7 @ARB; Ex. 7 @arb.ca.gov; Grundler, Christopher; Haugen, David; Simon, Karl; Bunker, Byron; Cook, Leila; Hengst, Benjamin

Redacted

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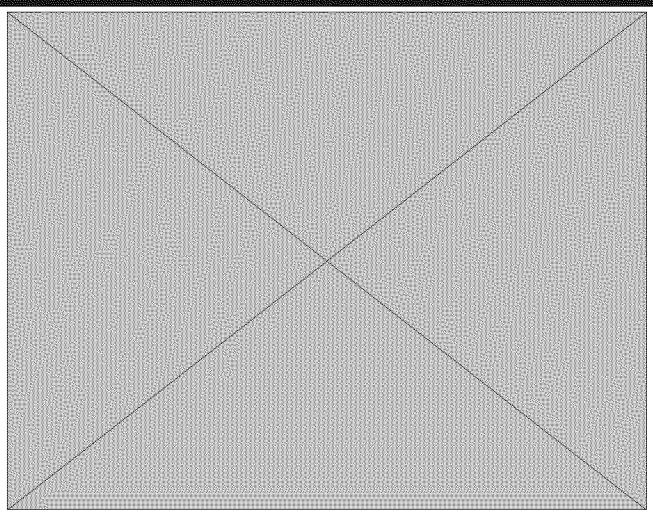
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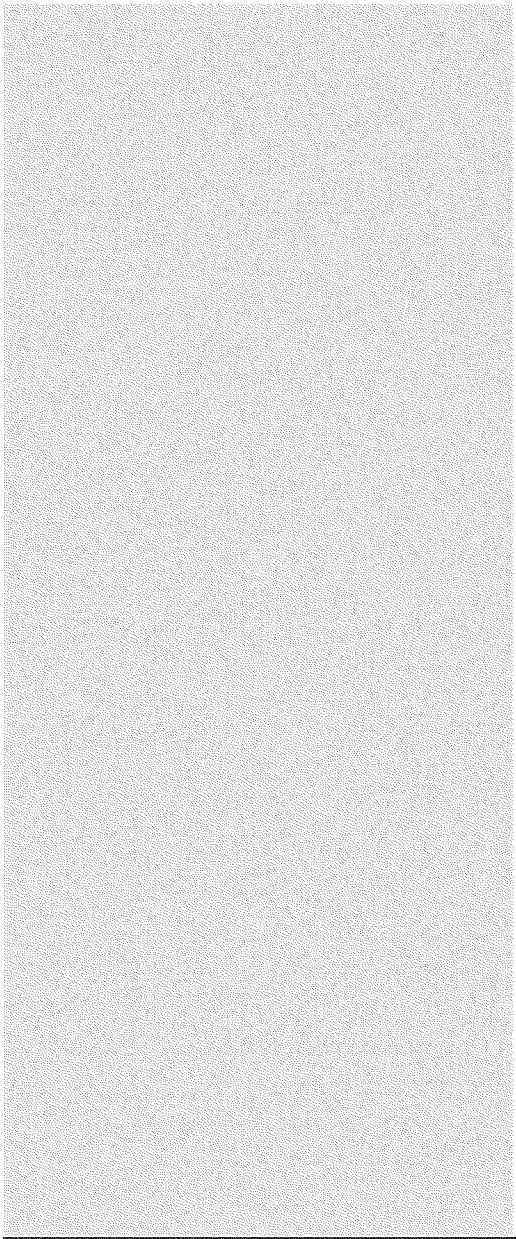
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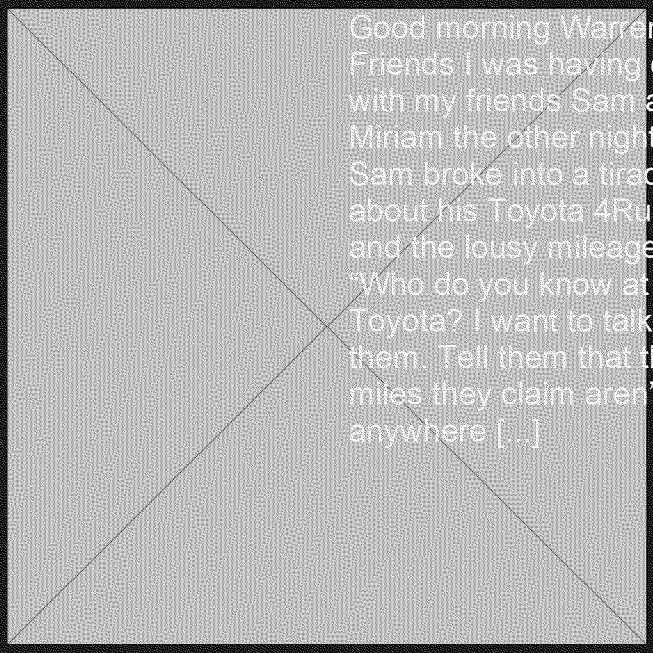
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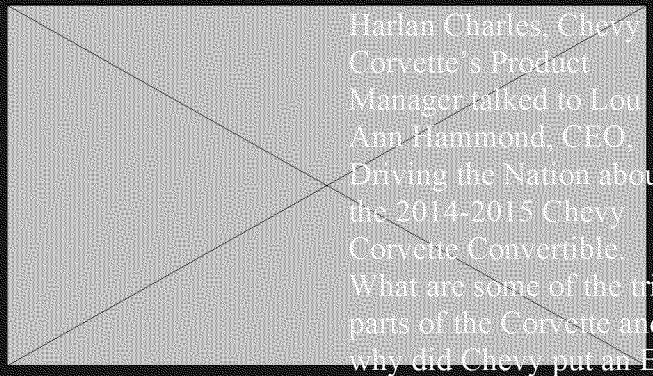
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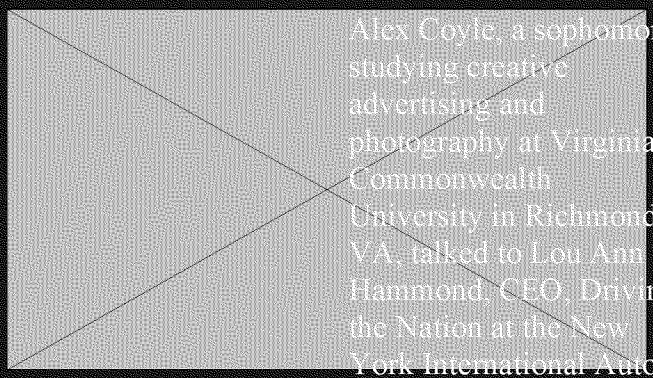
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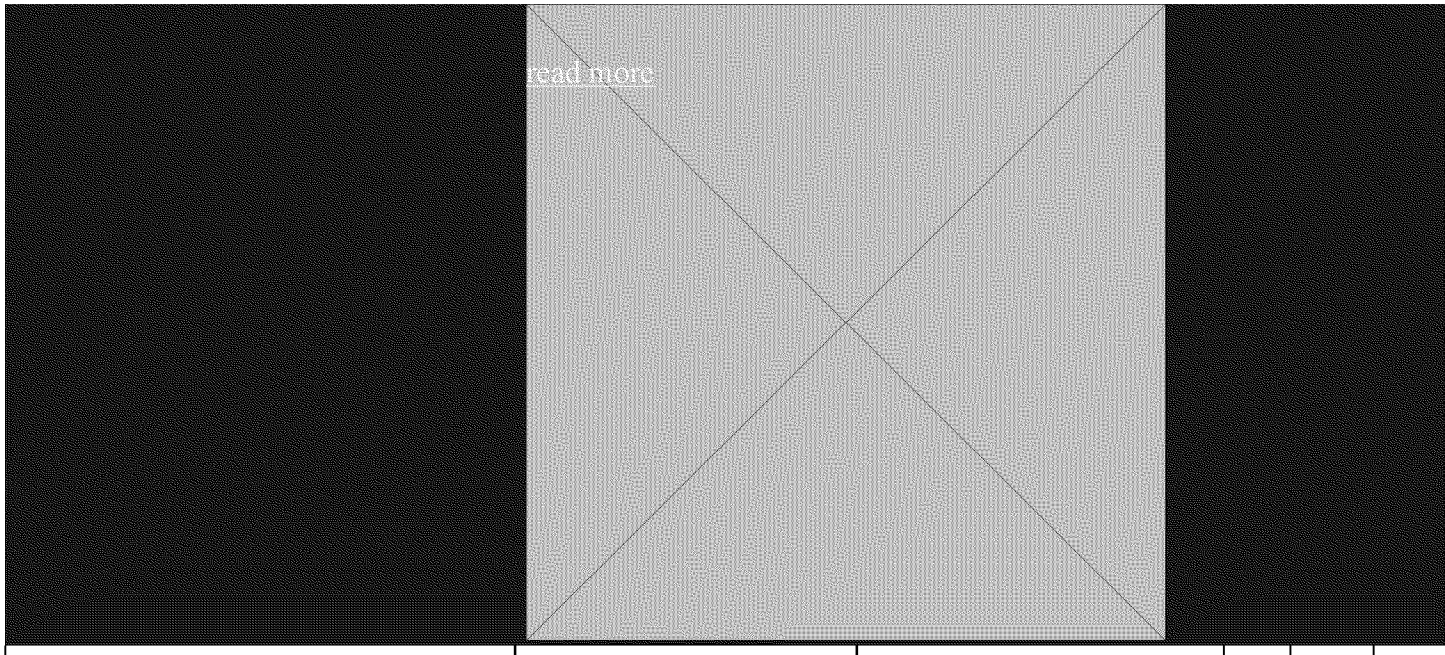


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Good morning Warren and Friends Pricing fo new 2015 Golf GTI has been announced and $24,395 for the entry-level S trim in two-doo six-speed manual transmission, an increase o over the base price of the previous model. I d Subaru WRX, base $31,195 total $31,990. Th



New Car Reviews

2014 Jeep Grand Cherokee Overland

2014 Chevrolet Camaro

2014 Honda Civic Coupe

2014 Hyundai Equus

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To: Charmley, William[charmley.william@epa.gov]

Ex. 7

Sent: Thur 6/12/2014 12:54:55 AM
Subject: Re: Draft Agenda items for the next ARB-OTAQ Senior Leadership coordination meeting for Thursday, June 12 at 1pm pacific time/4pm eastern time

Non-Responsive

> On Jun 11, 2014, at 2:17 PM, "Charmley, William" <charmley.william@epa.gov> wrote:
>
> Dear all –
>
> We are still on for our Monthly Coordination call tomorrow. I have taken the input from Alberto, as well as my own suggestions, and put them into the attached agenda. I took a guess at prioritization of these items, we can discuss any need to change the order at the beginning of tomorrow meeting.
>
> I also attached the agenda for the Mexico workshop that EPA and ARB have been invited to for July from ICCT, which is part of agenda item #2
>
> Thanks
> Bill
>
>
>
>
>
> From: Ayala, Alberto@ARB [mailto:aayala@arb.ca.gov]
> Sent: Thursday, June 05, 2014 1:17 PM

Ex. 7

> Subject: RE: Call for possible Agenda items for the next ARB-OTAQ Senior Leadership coordination meeting for Thursday, June 12 at 1pm pacific time/4pm eastern time
>

Non-Responsive

Non-Responsive

>
>
>
>
> From: Charmley, William [mailto:charmley.william@epa.gov]
> Sent: Thursday, June 05, 2014 9:56 AM

Ex. 7

> Subject: Call for possible Agenda items for the next ARB-OTAQ Senior Leadership coordination meeting for Thursday, June 12 at 1pm pacific time/4pm eastern time
>

Non-Responsive

Non-Responsive

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Thur 6/12/2014 2:55:37 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of June 11, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-6-11-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of June 11, 2014

Attached are the data in Verify as of June 11, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on June 17, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen	Group of	A3	VGA 7	1.8	4
		2015 Volkswagen	Group of	A3 Cabriolet	VGA 6	1.8	4
		2015 Volkswagen	Group of	A3 Cabriolet quattro	VGA 5	2.0	4
		2015 Volkswagen	Group of	A3 quattro	VGA 4	2.0	4
		2015 Volkswagen	Group of	A4	VGA 46	2.0	4
		2015 Volkswagen	Group of	A4 quattro	VGA 64	2.0	4
		2015 Volkswagen	Group of	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen	Group of	A5 Cabriolet quattro	VGA 66	2.0	4
		2015 Volkswagen	Group of	A5 quattro	VGA 65	2.0	4
		2015 Volkswagen	Group of	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen	Group of	A6	VGA 47	2.0	4
		2015 Volkswagen	Group of	A6 quattro	VGA 48	2.0	4
		2015 Volkswagen	Group of	A6 quattro	VGA 72	3.0	6
Diesel;		2015 Volkswagen	Group of	A6 quattro	VGA 17	3.0	6
		2015 Volkswagen	Group of	A7 quattro	VGA 71	3.0	6
Diesel;		2015 Volkswagen	Group of	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen	Group of	A8	VGA 40	3.0	6
		2015 Volkswagen	Group of	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen	Group of	A8L	VGA 15	3.0	6
		2015 Volkswagen	Group of	A8L	VGA 41	3.0	6
		2015 Volkswagen	Group of	A8L	VGA 10	4.0	8
		2015 Volkswagen	Group of	A8L	VGA 14	6.3	12
		2015 Volkswagen	Group of	allroad quattro	VGA 68	2.0	4
		2015 Volkswagen	Group of	Q3	VGA 62	2.0	4
		2015 Volkswagen	Group of	Q3 quattro	VGA 37	2.0	4
		2015 Volkswagen	Group of	Q5	VGA 67	2.0	4
		2015 Volkswagen	Group of	Q5	VGA 70	3.0	6
Diesel;		2015 Volkswagen	Group of	Q5	VGA 16	3.0	6
Hybrid;		2015 Volkswagen	Group of	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen	Group of	Q7	VGA 12	3.0	6
		2015 Volkswagen	Group of	Q7	VGA 51	3.0	6
		2015 Volkswagen	Group of	R8	VGA 27	4.2	8
		2015 Volkswagen	Group of	R8	VGA 29	4.2	8
		2015 Volkswagen	Group of	R8	VGA 35	5.2	10
		2015 Volkswagen	Group of	R8	VGA 33	5.2	10
		2015 Volkswagen	Group of	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen	Group of	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen	Group of	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen	Group of	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen	Group of	RS5	VGA 30	4.2	8
		2015 Volkswagen	Group of	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen	Group of	RS7	VGA 21	4.0	8
		2015 Volkswagen	Group of	S3	VGA 42	2.0	4
		2015 Volkswagen	Group of	S4	VGA 73	3.0	6
		2015 Volkswagen	Group of	S4	VGA 76	3.0	6
		2015 Volkswagen	Group of	S5	VGA 74	3.0	6
		2015 Volkswagen	Group of	S5	VGA 77	3.0	6
		2015 Volkswagen	Group of	S5 Cabriolet	VGA 75	3.0	6
		2015 Volkswagen	Group of	S6	VGA 20	4.0	8
		2015 Volkswagen	Group of	S7	VGA 19	4.0	8
		2015 Volkswagen	Group of	S8	VGA 9	4.0	8
		2015 Volkswagen	Group of	SQ5	VGA 69	3.0	6

	2015	Volkswagen	Audi	TT Coupe quattro	VGA	2	2.0	4
	2015	Volkswagen	Audi	TT Roadster quattro	VGA	3	2.0	4
	2015	Volkswagen	Bentley	Continental GT	VGA	24	4.0	8
	2015	Volkswagen	Bentley	Continental GT	VGA	43	6.0	12
	2015	Volkswagen	Bentley	Continental GT Convertible	VGA	22	4.0	8
	2015	Volkswagen	Bentley	Continental GT Convertible	VGA	45	6.0	12
	2015	Volkswagen	Bentley	Flying Spur	VGA	23	4.0	8
	2015	Volkswagen	Bentley	Flying Spur	VGA	44	6.0	12
	2015	Volkswagen	Bentley	Mulsanne	VGA	61	6.8	8
	2015	Volkswagen	Bugatti	Veyron	VGA	60	8.0	16
	2015	Volkswagen	Lamborghini	Aventador	VGA	52	6.5	12
	2015	Volkswagen	Lamborghini	Aventador Roadster	VGA	53	6.5	12
	2015	Volkswagen	Lamborghini	Aventador	VGA	54	6.5	12
	2015	Volkswagen	Lamborghini	Huracan	VGA	25	5.2	10
	2015	Volkswagen	Volkswagen	Beetle	VGA	79	1.8	4
Error-- conY	2015	Volkswagen	Volkswagen	Beetle	VGA	78	1.8	4
Error-- conY	2015	Volkswagen	Volkswagen	Beetle	VGA	81	2.0	4
	2015	Volkswagen	Volkswagen	Beetle	VGA	83	2.0	4
	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	80	1.8	4
	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	82	2.0	4
	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	84	2.0	4
	2015	Volkswagen	Volkswagen	CC	VGA	58	2.0	4
	2015	Volkswagen	Volkswagen	CC	VGA	59	2.0	4
	2015	Volkswagen	Volkswagen	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen	Volkswagen	Eos	VGA	36	2.0	4
	2015	Volkswagen	Volkswagen	GTI	VGA	1	2.0	4
	2015	Volkswagen	Volkswagen	GTI	VGA	8	2.0	4
	2015	Volkswagen	Volkswagen	Passat	VGA	55	3.6	6
	2015	Volkswagen	Volkswagen	Tiguan	VGA	39	2.0	4
	2015	Volkswagen	Volkswagen	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Touareg	VGA	13	3.0	6
	2015	Volkswagen	Volkswagen	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	20	27	23				25.2000	37.3000	29.5075
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995
Auto(S8)	17	24	19				20.8000	32.9000	24.9252

Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M	24	33	27	30.3689	46.0618	35.8579
Auto(AM-S	24	30	26	29.1689	42.3558	32.9213
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable	B	(e.g. C	
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable	B	(e.g. C	
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8		
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8		
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8		
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8		
19.9584	26.6824	22.5112		TC	Turbocharged	SA	Semi-Automatic	8		
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6		
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6		
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8		
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic	8		
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8		
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8		
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8		
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic	8		
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6		
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6		
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8		
16.7285	23.6581	19.2682		SC	Supercharged	SA	Semi-Automatic	8		

22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	SA	Semi-Automatic	8
12.4737	21.0866	15.2827 G	TC	Turbocharged	SA	Semi-Automatic	8
13.8190	23.8488	17.0447 G	TC	Turbocharged	SA	Semi-Automatic	8
12.0228	20.0478	14.6643 G	TC	Turbocharged	SA	Semi-Automatic	8
13.8190	23.8488	17.0447 G	TC	Turbocharged	SA	Semi-Automatic	8
12.0228	20.0478	14.6643 G	TC	Turbocharged	SA	Semi-Automatic	8
10.5402	17.7129	12.8889 G	TC	Turbocharged	SA	Semi-Automatic	8
8.4232	14.7698	10.4424 G	TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199 G	NA	Naturally A	AMS	Automated	7
9.7957	16.2453	11.9264 G	NA	Naturally A	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836 G	NA	Naturally A	AMS	Automated	7
14.0224	20.0427	16.2140 G	NA	Naturally A	AMS	Automated Manual- Selectable	7 (e.g. Au
24.7637	32.6943	27.7980	TC	Turbocharged	SA	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharg	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharg	AMS	Automated	6
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	SA	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally A	SA	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally A	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	SA	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SA	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SA	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally A	SA	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV06.3VUM	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		389	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT02.0AUH	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAT03.0NU3			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT03.0ALT	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
t	N	A	All Wheel	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
t	N	A	All Wheel	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel D	FVGAV02.	15		G	Gasoline (I
t	N	A	2-Wheel D	FVGAV02.	15		GP	Gasoline (I
N	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV03t6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	Unleaded Recommended	Not exempt				86	12		
MPG	Unleaded Recommended	Not exempt	79	10					
MPG	Unleaded Recommended	Not exempt	79	10					
MPG	Unleaded Recommended	Not exempt				86	10		
MPG	Unleaded Recommended	Not exempt				91	12		
MPG	Unleaded Recommended	Not exempt				91	12		
MPG	Unleaded Recommended	Not exempt				91	12		
MPG	Unleaded Recommended	Not exempt	81	10					
MPG	Unleaded Recommended	Not exempt	84	12					
MPG	Unleaded Recommended	Not exempt	84	12					
MPG	Unleaded Recommended	Not exempt				98	16		
MPG	Unleaded Recommended	Not exempt				98	16		
MPG	Unleaded Recommended	Not exempt				98	16		
MPG	ULSD (15 ppm, max sulfur)	Not exempt				98	16		
MPG	Unleaded Recommended	Not exempt						94	25
MPG	ULSD (15 ppm, max sulfur)	Not exempt						94	25
MPG	Unleaded Recommended	Not exempt				100	15		
MPG	Unleaded Recommended	Not exempt				100	15		
MPG	ULSD (15 ppm, max sulfur)	Not exempt				107	15		
MPG	Unleaded Recommended	Not exempt				107	15		
MPG	Unleaded Recommended	Not exempt				107	15		
MPG	Unleaded Recommended	Not exempt				107	15		
MPG	Unleaded Recommended	Not exempt				90	28		
MPG	Unleaded Recommended	Not exempt						84	17
MPG	Unleaded Recommended	Not exempt						84	17
MPG	Unleaded Recommended	Truck							
MPG	Unleaded Recommended	Truck							
MPG	ULSD (15 ppm, max sulfur)	Truck							
MPG	Unleaded Recommended	Truck							
MPG	ULSD (15 ppm, max sulfur)	Truck							
MPG	Unleaded Recommended	Truck							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt							
MPG	Unleaded Recommended	Not exempt	84	13					
MPG	Unleaded Recommended	Not exempt	81	10					
MPG	Unleaded Recommended	Not exempt						94	25
MPG	Unleaded Recommended	Not exempt				86	10		
MPG	Unleaded Recommended	Not exempt				90	13		
MPG	Unleaded Recommended	Not exempt				90	13		
MPG	Unleaded Recommended	Not exempt	84	13					
MPG	Unleaded Recommended	Not exempt	84	13					
MPG	Unleaded Recommended	Not exempt	81	10					
MPG	Unleaded Recommended	Not exempt				98	16		
MPG	Unleaded Recommended	Not exempt						94	25
MPG	Unleaded Recommended	Not exempt				100	15		
MPG	Unleaded Recommended	Truck							

MPG	miles per gallon	Not exempt	74	13					
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt			101	11			
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	77	11					
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							

Annual Fu	EPA Calcu	Comment	City2 FE (U	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2400	2400	CO2 corrections	14	21	16				17.8377
2200	2200								
2400	2400		14	21	16				17.8377
2400	2400	CO2 corrections	14	21	16				17.8377
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2500	2500		14	18	15				17.1
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							
3000	3000								

2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
4400	4400				
3550	3550	Release date change			
1900	1900				
1950	1950				
2200	2200				
2200	2200				
1950	1950				
2300	2300				
2200	2200				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

Hwy2	UnrCmb2	UrCmy2	UnrHwy2	UnrCmb2	Unr Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
SB.									
on changed to #1 for 1.8L engine code CNSB									
L engine code CNTC.									
ed to #2 for 2.0L engine code CNTC									
28.7257	21.5058	14.106	20.5015	16.4096	270	E	Ethanol (E85)	MPG	miles per gallon
28.7257	21.5058	14.106	20.5015	16.4096	270	E	Ethanol (E85)	MPG	miles per gallon
28.7257	21.5058	14.106	20.5015	16.4096	270	E	Ethanol (E85)	MPG	miles per gallon
25.6	20.1038	13.5432	18.3117	15.3409	254	E	Ethanol (E85)	MPG	miles per gallon
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E85)	MPG	miles per gallon

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG miles per gallon

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
2900	439	302	378	2900	SIDI; FFV;	2	24	Compact Cars
				SIDI;	2	24		Compact Cars
2900	439	302	378	2900	SIDI; FFV;	2	23	Subcompact Cars
2900	439	302	378	2900	SIDI; FFV;	2	23	Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
3100	458	338	404	3100	SIDI; FFV;	2	27	Small Station Wag
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	231		Small SUV 4WD

or engine code CDMA and all TT models.					SIDI;	2	23	Subcompact Cars
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seate
						2	21	Two Seaters
						2	21	Two Seate
					SIDI & PFI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

SC	Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
	car	Vehicle Specific 5-cycle	2/25/2014		16011		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		16013		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		16012		N	N		
	car	Vehicle Specific 5-cycle	1/15/2014		16010		N	N		
	car	Derived 5-cycle label	6/9/2014		15670		N	N		
	car	Derived 5-cycle label	6/9/2014		16031		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15675		N	N		
	car	Derived 5-cycle label	6/9/2014		16033		N	N		
	car	Derived 5-cycle label	6/9/2014		16032		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15676		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15673		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15674		N	N		
	car	Derived 5-cycle label	6/9/2014		16062		N	N		
	car	Vehicle Specific 5-cycle	6/10/2014		15458		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16061		N	N		
	car	Vehicle Specific 5-cycle	6/10/2014		15459		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15647		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15385		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15456		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15648		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15386		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15442		N	N		
	cars	Derived 5-cycle label	6/9/2014		16035		N	N		
	car	Derived 5-cycle label	8/4/2014		16057		N	N		
	car	Vehicle Specific 5-cycle	8/4/2014		15650		N	N		
		Derived 5-cycle label	6/9/2014		16034		N	N		
		Vehicle Specific 5-cycle	6/9/2014		16060		N	N		
		Vehicle Specific 5-cycle	6/10/2014		15460		N	N		
		Vehicle Specific 5-cycle	6/9/2014		15999		N			
	D	Vehicle Specific 5-cycle	6/12/2014		15408		N			
	D	Derived 5-cycle label	6/9/2014		15711			N		
	car	Vehicle Specific 5-cycle	6/9/2014		15493		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15497		N			
	car	Vehicle Specific 5-cycle	6/9/2014		15601		N			
	car	Vehicle Specific 5-cycle	6/9/2014		15598		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15492		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15496			N		
	car	Vehicle Specific 5-cycle	6/9/2014		15600			N		
	car	Vehicle Specific 5-cycle	6/9/2014		15597			N		
	car	Vehicle Specific 5-cycle	6/9/2014		15589			N		
	car	Vehicle Specific 5-cycle	6/9/2014		15590			N		
	car	Vehicle Specific 5-cycle	6/12/2014		15577			N		
	car	Vehicle Specific 5-cycle	8/4/2014		15651			N		
	car	Vehicle Specific 5-cycle	6/9/2014		16064			N		
	car	Vehicle Specific 5-cycle	6/9/2014		16067			N		
	car	Vehicle Specific 5-cycle	6/9/2014		16065			N		
	car	Vehicle Specific 5-cycle	6/9/2014		16068		N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16066		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15576		Y	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15575		Y	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15400		N	N		
		Vehicle Specific 5-cycle	6/9/2014		16059		N	N		

car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15682	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16084	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16087	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	variable valve timing and valve lift valves	Y	variable valve timing and valve lift valves			inle
N	N	N	Y	Variable Valve Timing System with inlet	N				
N	N	N	Y	Variable Valve Timing System with inlet	N				
N	N	N	Y	Continuous Variable Valve Timing System with inlet	Y	Variable Valve Timing System with inlet			
N	N	N	Y	Continuous Variable Valve Timing System with inlet	Y	Variable Valve Timing System with inlet			
N	N	N	N		Y	2-Cam Profile System			
N	N	N	Y	ECM controlled,oil pressure driven	N				
N	N	N	Y	ECM controlled,oil pressure driven	N				
N	N	N	Y	ECM controlled, oil pressure driven	N				
N	N	N	Y	ECM controlled,oil pressure driven	N				
N	N	N	Y	ECM controlled,oil pressure driven	N				
N	N	N	Y	ECM controlled,oil pressure driven	N				
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	Porsche VVT	Y	Porsche VVT			
N	N	N	Y	intake and exhaust	N				
N	N	N	Y	intake and exhaust	N				
N	N	N	Y	Intake and exhaust	N				
N	N	N	Y	Intake and exhaust	N				
N	N	N	Y	intake and exhaust	N				
N	N	N	Y	intake and exhaust	N				

N	N	N	Y	Intake and E	Exhaust
N	N	N	Y	Intake	N
N	N	N	Y	Intake	N
N	N	N	Y	Intake	N
N	N	N	Y	Intake and E	Exhaust
N	N	N	Y	Intake	N
N	N	N	Y	Intake and E	Exhaust
N	N	N	Y	Intake and E	Exhaust
N	N	N	Y	Intake and E	Exhaust
N	N	N	Y	Intake and E	Exhaust
N	N	N	Y	Intake	N
N	N	N	Y	Intake	N
N	N	Engine Code (CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECANICAL HYDRAULIC VVT SYSTEM ON INTAKE C	
N	N	Engine Co	N	Y	MECANICAL
N	N	Engine Co	N	Y	MECANICAL
N	N	Engine Code (CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECANICAL HYDRAULIC VVT SYSTEM ON INTAKE C	
N	N	Engine Code (CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECANICAL HYDRAULIC VVT SYSTEM ON INTAKE C	
N	N	Engine Code (CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECANICAL HYDRAULIC VVT SYSTEM ON INTAKE C	
N	N	Engine Code (CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECANICAL HYDRAULIC VVT SYSTEM ON INTAKE C	
N	N	N	Y	position of in	Intake/exhaust camshaft electronically
N	N	N	Y	position of in	Intake/exhaust camshaft electronically
N	N	N	Y	position of in	Intake/exhaust camshaft electronically
N	N	N	Y	CONTINUOU	S VARIABLE VALVE TIMING
N	N	2.0L Engine Code CNTC	Y	CONTINUOU	S VARIABLE VALVE TIMING
N	N	2.0L Engine Code CNTC	Y	CONTINUOU	S VARIABLE VALVE TIMING
N	N	Engine code: CDVB	Y	Electronic co	ntrol / Hydraulic adjustment
N	N	N	Y	position of in	Intake/exhaust camshaft electronically
N	N	N	Y	position of in	Intake/exhaust camshaft electronically
N	N	Engine Code CNRB	N		N
N	N	N	Y	INTAKE / EX	HAUST CAM TIMING ADJUSTED HYDRAU
N	N	Carryover engine, durability but new EDV. Alm	Y	Timing on in	Intake side only.
N	N	N	Y	Timing on in	Intake side only.

evice Desc	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
t valves										
t valves										
t valves										

AMS
AKE CAMS
AKE CAMS
AMS
AMS
AMS
AMS
controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell D	Usable H2	Fuel Cell C	HEV-EV C#	Drive Mo	Motor Ger

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				GDI	Spark Ignition Direct Injection		Y		0W30
				MFI	Multipoint/sequential fuel injection		N		0W20
				MFI	Multipoint/sequential fuel injection		N		0W20
				MFI	Multipoint/sequential fuel injection		N		0W20
				MFI	Multipoint/sequential fuel injection		N		0W20
				MFI	Multipoint/sequential fuel injection		N		0W20
				MFI	Multipoint/sequential fuel injection		N		SAE 0W-20
				MFI	Multipoint/sequential fuel injection		N		SAE 0W-20
				MFI	Multipoint/sequential fuel injection		N		SAE 0W-40
				MFI	Multipoint/sequential fuel injection		N		SAE 5W-30
				MFI	Multipoint/sequential fuel injection		N		SAE 5W-30
				MFI	Multipoint/sequential fuel injection		N		SAE 5W-30
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDI	Spark Ignition Direct Injection		N		0W40
				GDPI	Spark Ignition direct & ported injection		N		0W20 GF5
				GDPI	Spark Ignition direct & ported injection		N		0W20 GF5
				MFI	Multipoint/sequential fuel injection		N		0W-20
				MFI	Multipoint/sequential fuel injection		N		0W-20
				GDPI	Spark Ignition direct & ported injection		N		0W20 GF5
				GDPI	Spark Ignition direct & ported injection		N		0W20 GF5

GDI	Spark Ignition Direct Injection	N	GF-5 5W-30
MFI	Multipoint/sequential fuel injection	N	GF5 0W-20
MFI	Multipoint/sequential fuel injection	N	GF5 0W-20
MFI	Multipoint/sequential fuel injection	N	GF5 0W-20
MFI	Multipoint/sequential fuel injection	N	GF-5 5W-30
MFI	Multipoint/sequential fuel injection	N	GF5 0W-20
MFI	Multipoint/sequential fuel injection	N	GF-5 5W-30
GDI	Spark Ignition Direct Injection	N	GF-5 5W-30
GDI	Spark Ignition Direct Injection	N	GF-5 5W-30
MFI	Multipoint/sequential fuel injection	N	GF-5 5W-30
MFI	Multipoint/sequential fuel injection	N	5W-30
MFI	Multipoint/sequential fuel injection	N	5W-30
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignit	N	5W40 VW
GDI	Spark Ignit	N	5W40 VW
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
MFI	Multipoint/sequential fuel injection	N	5W-30
MFI	Multipoint/sequential fuel injection	N	5W-30

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV)	Auto(AV)						
N	No	Manual(M5)	Manual(M5)						
N	No	Auto(AV-S6)	Auto(AV-S6)						
N	No	Auto(AV-S6)	Auto(AV-S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(AV)	Auto(AV)						
N	No	Auto(AV-S7)	Auto(AV-S7)						
N	No	Auto(AM6)	Auto(AM6)	NA					
N	No	Auto(A4)	Auto(A4)						
N	No	Auto(AV)	Auto(AV)						
N	No	Manual(M5)	Manual(M5)						
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	NA					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	NA					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera 4					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera 4S					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera 4S Executive					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera GTS					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera S					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo Executive					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo S					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo Executive					
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Manual(M6)	Manual(M6)						

N	No	Auto(AV-S8)	Auto(AV-S8)	
N	No	Auto(AV-S6)	Auto(AV-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AV-S6)	Auto(AV-S6)	
N	No	Auto(AV-S6)	Auto(AV-S6)	
N	No	Auto(AV-S6)	Auto(AV-S6)	
N	No	Auto(AV-S6)	Auto(AV-S6)	
N	No	Auto(AV-S8)	Auto(AV-S8)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(A4)	Auto(A4)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5	Manual(M5	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S6)	Auto(S6)	Blank
N	No	Auto(S6)	Auto(S6)	N/A

[redacted]	EPA Calculated Gas G	[redacted]	[redacted] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
39.6	[redacted]	7	7	FBMXV01.6N18	5		
37.4	[redacted]	7	7	FBMXV01.6N18	5		
38.5	[redacted]	7	7	FBMXV01.6N18	5		
34.7	[redacted]	6	6	FBMXV01.6N18	5		
36.8	[redacted]	7	7	FBMXV01.6N18	5		
38.2	[redacted]	7	7	FBMXV01.6N18	5		
39.6	[redacted]	7	7	FBMXV01.6N18	5		
37.4	[redacted]	7	7	FBMXV01.6N18	5		
38.5	[redacted]	7	7	FBMXV01.6N18	5		
34.7	[redacted]	6	6	FBMXV01.6N18	5		
36.8	[redacted]	7	7	FBMXV01.6N18	5		
38.2	[redacted]	7	7	FBMXV01.6N18	5		
39.6	[redacted]	7	7	FBMXV01.6N18	5		
34.7	[redacted]	6	6	FBMXV01.6N18	5		
36.8	[redacted]	7	7	FBMXV01.6N18	5		
34.7	[redacted]	6	6	FBMXV01.6N18	5		
36.8	[redacted]	7	7	FBMXV01.6N18	5		
38.2	[redacted]	7	7	FBMXV01.6N18	5		
39.6	[redacted]	7	7	FBMXV01.6N18	5		
38.2	[redacted]	7	7	FBMXV01.6N18	5		
39.6	[redacted]	7	7	FBMXV01.6N18	5		
38.2	[redacted]	7	7	FBMXV01.6N18	5		
39.6	[redacted]	7	7	FBMXV01.6N18	5		
55.2	[redacted]	9	9	FMTXV01.2GEX	5		
50.9	[redacted]	9	9	FMTXV01.2GEX	5		
36.2	[redacted]	7	7	FMTXT02.4GEW	6		
34.6	[redacted]	6	6	FMTXT02.4GEY	6		
30.6	[redacted]	5	5	FMTXT03.0GEW	6		
42.0	[redacted]	8	8	FNSXV02.5G5A	5		
34.8	[redacted]	6	6	FNSXV03.5G7A	5		
24.0	[redacted]	4	4	FNSXV03.8GBA	5		
40.2	[redacted]	7	7	FNSXV01.6G4A	5		
47.5	[redacted]	8	8	FNSXV01.6G4A	5		
42.2	[redacted]	7	7	FNSXV01.6G4A	5		
	[redacted]	4	4	FPRXT03.6MCS	5		
	[redacted]	4	4	FPRXT03.6MT6	5		
28.4	[redacted]	5	5	FPRXV03.6PV6	5		
27.7	[redacted]	5	5	FPRXV03.6PV6	5		
27.1	[redacted]	5	5	FPRXV03.6PV6	5		
26.7	[redacted]	5	5	FPRXV03.6PV6	5		
24.1	[redacted]	4	4	FPRXV04.8PS8	5		
27.1	[redacted]	5	5	FPRXV03.6PV6	5		
24.0	[redacted]	4	4	FPRXV04.8PT8	5		
23.7	[redacted]	4	4	FPRXV04.8PT8	5		
24.0	[redacted]	4	4	FPRXV04.8PT8	5		
23.7	[redacted]	4	4	FPRXV04.8PT8	5		
37.8	[redacted]	7	7	FFJXV02.0AJM	5		
33.0	[redacted]	6	6	FFJXV02.0AJM	5		
34.7	[redacted]	6	6	FTYXV02.5BEB	5		
34.8	[redacted]	6	6	FTYXV02.5BEB	5		
37.1	[redacted]	7	7	FFJXV02.0AJM	5		
32.3	[redacted]	6	6	FFJXV02.0AJM	5		

	[redacted]	6	6 FFJXJ02.0FPT	5
		7	7 FFJXJ02.5NKR	6
		6	6 FFJXJ02.5NKR	6
39.7		7	7 FFJXJ02.5HRV	6
30.1		5	5 FFJXJ03.6KTX	5
		7	7 FFJXJ02.5HRV	6
		5	5 FFJXJ03.6KTX	5
27.8		5	5 FFJXJ02.0FPT	5
31.4		6	6 FFJXJ02.0FPT	5
25.1		4	4 FFJXJ02.5PHU	5
44.2		8	8 FTYXV01.5BEB	5
45.4		8	8 FTYXV01.5BEB	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.	7
33.9		6	6 FVGAV02.	7
33.1		6	6 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
33.1		6	6 FVGAV02.0VPD	7
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5
30.5		5	5 FVVXJ02.5U3T	5
28.1		5	5 FVVXJ03.0U2T	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

FNSXV02.585A 8

FFJXJ02.5JSW	5
FFJXJ02.5JSW	5
FVGAV02.0VBD	5
FVGAV02.	5
FVGAV02.	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	1250		340	255	302			
	750		352	275	318			
	1250		337	275	309			
	0		380	292	340			
	500		353	287	323			
	750		352	264	312			
	1250		340	255	302			
	750		352	275	318			
	1250		337	275	309			
	0		380	292	340			
	500		353	287	323			
	750		352	264	312			
	1250		340	255	302			
	0		380	292	340			
	500		353	287	323			
	0		380	292	340			
	500		353	287	323			
	750		352	264	312			
	1250		340	255	302			
	750		352	264	312			
	1250		340	255	302			
	750		352	264	312			
	1250		340	255	302			
	4500		241	199	222			
	4000		262	208	238			
	1250		356	287	325			
	1000		372	301	340			
		1500	433	318	381			
	2500		328	232	284			
	1000		390	279	340	405		343
		4000	536	394	472			
	2250		341	245	298		254	297
	3500		282	223	255			
	2250		318	242	284	328	247	296
		4000	517	388	459			
		4000	537	382	467			
		2000	487	319	411			
		2500	494	331	421			
		2500	508	333	429			
		3250	517	336	436			
		4000	572	368	480			
		2500	508	333	429			
		4750	577	368	483			
		4750	583	372	488			
		4750	577	368	483			
		4750	583	372	488			
	750		361	264	317			
		500	411	297	360			
	1000		384	284	339			
	1000		381	287	339			
	750		361	264	317			
		500	411	298	360			

	500	384	323	357
1250		365	283	328
500		404	310	362
2250		341	246	298
	500	448	308	385
1500		353	269	315
	1000	453	326	396
	2500	454	346	405
	1000	419	313	371
	4000	520	383	458
2750		293	249	273
3000		290	237	266
1500		357	270	318
1250		372	270	326
0		377	302	343
0		393	292	347
1250		369	274	326
	500	392	314	357
0		393	292	347
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
750		358	271	319
750		355	258	311
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462
	500	432	306	375
	1000	461	317	396

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
263.7	180.3	226.2	340.3	255.0	301.9	
273.8	195.5	238.6	352.2	275.5	317.7	
261.2	195.3	231.5	337.3	275.2	309.4	
297.3	207.8	257.0	379.9	292.1	340.4	
274.6	204.1	242.9	353.1	287.1	323.4	
273.4	186.7	234.4	351.7	263.6	312.1	
263.7	180.3	226.2	340.3	255.0	301.9	
273.8	195.5	238.6	352.2	275.5	317.7	
261.2	195.3	231.5	337.3	275.2	309.4	
297.3	207.8	257.0	379.9	292.1	340.4	
274.6	204.1	242.9	353.1	287.1	323.4	
273.4	186.7	234.4	351.7	263.6	312.1	
263.7	180.3	226.2	340.3	255.0	301.9	
297.3	207.8	257.0	379.9	292.1	340.4	
274.6	204.1	242.9	353.1	287.1	323.4	
297.3	207.8	257.0	379.9	292.1	340.4	
274.6	204.1	242.9	353.1	287.1	323.4	
273.4	186.7	234.4	351.7	263.6	312.1	
263.7	180.3	226.2	340.3	255.0	301.9	
273.4	186.7	234.4	351.7	263.6	312.1	
263.7	180.3	226.2	340.3	255.0	301.9	
273.4	186.7	234.4	351.7	263.6	312.1	
263.7	180.3	226.2	340.3	255.0	301.9	
179.9	138.7	161.4	241.4	199.0	222.3	
197.6	145.5	174.2	262.2	208.2	237.9	
277.4	203.9	244.3	356.4	286.8	325.1	
290.5	214.6	256.3	371.9	301.2	340.1	
341.9	226.8	290.1	432.6	317.6	380.8	
253.0	163.0	212.5	327.6	231.7	284.5	
306.2	198.0	257.5	390.4	278.9	340.2	
437.7	265.3	360.1	536.5	394.0	472.4	
264.0	173.0	223.0	340.6	245.2	297.7	
214.4	156.3	188.3	282.1	222.7	255.4	
244.8	171.0	211.6	317.9	242.5	284.0	
413.4	278.8	352.8	517.0	387.7	458.8	
430.1	274.6	360.1	536.7	382.0	467.1	
387.7	227.8	315.7	486.6	319.0	411.2	
393.9	236.6	323.1	494.0	330.8	420.6	
405.8	238.5	330.5	508.0	333.4	429.4	
413.7	240.4	335.7	517.3	336.0	435.7	
460.2	264.2	372.0	572.2	368.0	480.3	
405.8	238.5	330.5	508.0	333.4	429.4	
464.1	264.0	374.1	576.8	367.7	482.7	
469.1	267.4	378.3	582.7	372.3	488.0	
464.1	264.0	374.1	576.8	367.7	482.7	
469.1	267.4	378.3	582.7	372.3	488.0	
281.0	186.7	238.6	360.7	263.6	317.0	
324.0	211.4	273.3	411.4	296.9	359.9	
301.0	202.0	256.4	384.3	284.2	339.3	
298.1	204.1	255.8	380.9	287.1	338.7	
281.0	187.0	238.7	360.6	264.0	317.1	
324.0	212.0	273.6	411.4	297.7	360.2	

301.0	231.0	269.5	384.2	323.2	356.8
285.0	201.0	247.2	365.4	282.8	328.2
318.0	221.0	274.4	404.3	309.8	361.8
264.0	173.6	223.3	340.6	245.9	298.0
355.0	220.0	294.3	448.0	308.4	385.2
274.5	190.9	236.9	353.0	269.2	315.3
359.0	232.7	302.2	452.7	325.5	395.5
360.0	248.0	309.6	453.9	346.1	405.4
330.0	223.0	281.9	418.5	312.5	370.8
416.0	275.0	352.6	520.0	382.5	458.1
224.0	175.5	202.2	293.4	248.6	273.2
221.2	166.6	196.6	290.1	236.6	266.0
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
322.0	206.1	269.8	392.7	291.6	347.2
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
322.0	206.1	269.8	392.7	291.6	347.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8
341.0	218.0	285.6	431.5	305.8	374.9
373.0	233.0	310.0	461.0	317.0	396.2

[illegible]	Comb Vol Higher	Final Label	EPA_FUEL	EPA_GHG	EPA_AMT
N	3.4	3.4			
N	3.6	3.6			
N	3.4	3.4			
N	3.8	3.8			
N	3.7	3.7			
N	3.6	3.6			
N	3.4	3.4			
N	3.6	3.6			
N	3.4	3.4			
N	3.8	3.8			
N	3.7	3.7			
N	3.6	3.6			
N	3.4	3.4			
N	3.8	3.8			
N	3.7	3.7			
N	3.8	3.8			
N	3.7	3.7			
N	3.6	3.6			
N	3.4	3.4			
N	3.6	3.6			
N	3.4	3.4			
N	3.6	3.6			
N	3.4	3.4			
N	2.5	2.5			
N	2.7	2.7			
N	3.7	3.7			
N	3.8	3.8			
N	4.3	4.3			
N	3.2	3.2			
N	3.8	3.8	3.8		
N	5.3	5.3			
N	3.3	3.3	3.3		
N	2.9	2.9			
N	3.2	3.3	3.3		
N	5.3	5.3			
N	5.3	5.3			
N	4.5	4.5			
N	4.8	4.8			
N	4.8	4.8			
N	5.0	5.0			
N	5.3	5.3			
N	4.8	4.8			
N	5.6	5.6			
N	5.6	5.6			
N	5.6	5.6			
N	5.6	5.6			
N	3.6	3.6			
N	4.0	4.0			
N	3.8	3.8			
N	3.8	3.8			
N	3.6	3.6			
N	4.0	4.0			

N	4.0	4.0
N	3.7	3.7
N	4.0	4.0
N	3.3	3.3
N	4.3	4.3
N	3.6	3.6
N	4.5	4.5
N	4.8	4.8
N	4.2	4.2
N	5.3	5.3
N	3.1	3.1
N	3.0	3.0
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	3.8	3.8
N	3.7	3.7
N	4.0	4.0
N	3.8	3.8
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.6	3.6
N	3.6	3.6
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3
N	4.3	4.3
N	4.5	4.5

EPA_UNRD

EPA_UNRI	EPA_UNRI	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
				Mr Kachuen	Wong
				Mr Kachuen	Wong
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				Mr Kachuen	Wong
				Mr Kachuen	Wong
				Mr Kachuen	Wong
				Mr Kachuen	Wong
				Mr Yukimasa	Kurosaki
				Mr Yukimasa	Kurosaki
				Mr Yukimasa	Kurosaki
				Mr Yukimasa	Kurosaki
				Mr Yukimasa	Kurosaki
				Mr Kenji	Mabuchi
				Mr Kenji	Mabuchi
				Mr Kenji	Mabuchi
				Mr Kenji	Mabuchi
				Mr Kenji	Mabuchi
				Mr Kenji	Mabuchi
				Mr Ross	Gatzke
				Mr Ross	Gatzke
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				Mr Ross	Gatzke
				Mr Ross	Gatzke
				Mr Ross	Gatzke
				Mr Ross	Gatzke
				Mr Ross	Gatzke
				Mr Ross	Gatzke
				Ms Kiriko	Kano
				Ms Kiriko	Kano
				Ms Kiriko	Kano
				Ms Kiriko	Kano
				Ms Etsuko	Asano
				Ms Etsuko	Asano

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Ms Etsuko Asano
Ms Etsuko Asano
Ms Etsuko Asano
Ms Kiriko Kano
Ms Kiriko Kano
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
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Mr Richard E Thomas Jr
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Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
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Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Gregory Buffalino
Mr Gregory Buffalino

mined)

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Fri 6/13/2014 12:48:05 PM
Subject: Status update - 2.0L TDI Certification

Hello Jim,

Can you give me an update on the status of a condition certificate for the diesel test group FVGAV02.0VAL. We are drawing near the expected launch dates.

Thanks,

Bill

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7
Ex. 7
From: Ex. 7
Sent: Fri 6/13/2014 1:28:57 PM
Subject: Meeting with VW/Audi

Hello Jim:

I am not sure if you are aware of a VW Group meeting being set up for the morning of Wednesday, July 16, 2014 with Mike Olechiw and others to discuss outstanding issues with Tier 3 implementation. We would also like the opportunity to discuss SCR-related topics. Would it be possible to have that discussion in the afternoon of the same day? That would allow us to take advantage of the presence of colleagues from Volkswagen and Audi. The request would be for another couple of hours.

Best regards,

Ex. 7

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phon Ex. 7

Cell:

E-M

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Fri 6/13/2014 3:12:49 PM
Subject: RE: VW PHEV presentation

Thanks for sending me the presentation. I have also forwarded it to others to review. Unfortunately next week is not a good time since I will be off-site most of the week. How about some time the week of the 23rd?

_Jim

From: Ex. 7 @vw.com]
Sent: Wednesday, June 11, 2014 9:48 AM
To: Snyder, Jim
Cc: Ex. 7
Subject: VW PHEV presentation

Good morning Jim,

Ex. 7 is out of the office this week and wanted me to send this updated PHEV presentation from our folks in Germany.

They would like to have a meeting with you (and possibly Rob?) next week to explain the details.

Do you have an hour or so for us to come see you (and Germany to be on the phone) early in the week?

Thanks very much,

Ex. 7

Ex. 7

EEO-Auburn Hills MI

Ex. 7

Thank you,

Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Fri 6/13/2014 5:05:14 PM
Subject: VW Group Decision Information 2.0L Flex Fuel Allroad

Hello Jim,

Test results and decision information have been submitted for the Audi Allroad 2.0L Flex Fuel Testgroup: FVGAJ02.0AUF, for the Automatic 8 speed transmission. Vehicle ID's and info are below.

……

Vehicle ID: FAUF-BAA /config 0 (Gasoline Tests)

Purpose: FEDV

Tests Submitted: FTP / Hwy

……

Vehicle ID: FAUF-BAA /config 1 (E85 Tests)

Purpose: FEDV

Tests Submitted: FTP / Hwy

Please let me know if you have any questions.

Regards,

Greg Allen

VWGoA EEO

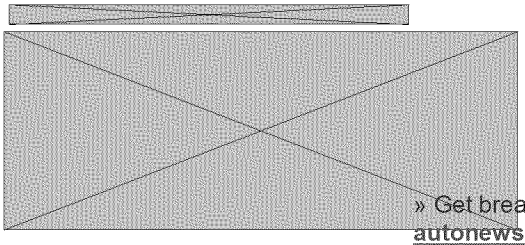
(248)754-4209

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 6/13/2014 8:33:12 PM
Subject: DAILY: Toyota details recall plans for 844,277 U.S. vehicles with Takata airbags | GM recalls another 530,000 U.S. vehicles | Look who's leading the small-car mileage race

Today's most read story

GM to recall 511,528 Camaros for ignition-related defect; 3 other recalls announced

June 13, 2014



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TOP NEWS

Toyota details recall plans for 844,277 U.S. vehicles with Takata airbags

10:16 am U.S. ET | Jun 13

Toyota outlined a plan to fix airbags made by supplier Takata that could project metal fragments in 844,277 previously recalled cars and trucks in the United States, including the 2003 and 2004 Corolla and GM's Pontiac Vibe. ... » READ

THE GM RECALL

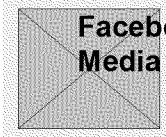
GM to recall 511,528 Camaros for ignition-related defect; 3 other recalls announced

UPDATED: 6/13/14 4:05 pm ET - adds details
9:20 am U.S. ET | Jun 13

General Motors announced four more recalls today covering more than 500,000 cars sold in the United States -- including every Camaro sold since the current iteration of the iconic muscle car went on sale. ...

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Facebook Presenting at the TLS Auto Social Media Summit

People Driven Marketing in a Connected World – A growing opportunity for the automotive industry is harnessing the power of people as the engine for data and insights. Kass Dawson, Head Automotive Global Vertical Marketing will share how people-based marketing based on Big Data can help drive more successful business outcomes. For more info visit.

Chrysler names 6 new board members, including Bigland, Manley

1:58 pm U.S. ET | Jun 13

Chrysler Group has appointed six new directors to its board, effective June 10, adding five more board seats, the company said today. ... » READ

Fiat Chrysler will achieve 2014 targets despite Europe, Brazil troubles, Marchionne says

9:53 am U.S. ET | Jun 13

Fiat Chrysler CEO Sergio Marchionne said the company will meet its 2014 targets even though the Brazilian car market will remain difficult and Europe shows no sign of improvement. ... » READ

Silverado team throws down at Ram hoedown

12:01 am U.S. ET | Jun 9

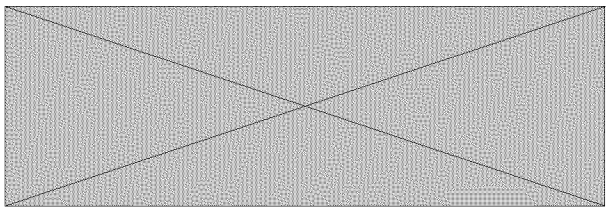
Chevy tacked up a special message on the exterior wall of a building nearby Ram's Downtown Hoedown. ... » READ

ON THE BLOGS

RICHARD TRUETT

Look who's leading the small-car mileage race

» READ



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How Ray DeGiorgio threw GM investigators off track for years

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Skyrocketing Jeep in the right place at the right time

Marchionne insists Fiat Chrysler needs 9 brands; market watchers disagree

Ford, Kia tested as audiences shrink for 'Idol' and 'The Voice'

VW's distracted driving ad attracts 17.8M views on YouTube

2:15 pm U.S. ET | Jun 13

VW, boxed out of World Cup on TV, finds way to target fans in U.S.

12:17 pm U.S. ET | Jun 13

BMW and Tesla executives met to discuss electric cars

4:48 am U.S. ET | Jun 13

Ghosn explains why Nissan-Renault needs to be among top



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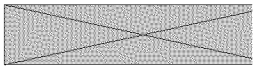
» Oct. 15 - Best Dealerships To Work For



UPCOMING WEBINARS

» June 19 - 30 Social Media Tips by Digital Air Strike

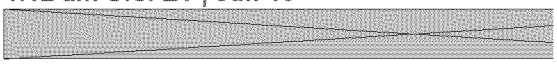
» June 24 - Automotive Innovation by IBM



UPCOMING

3 automakers

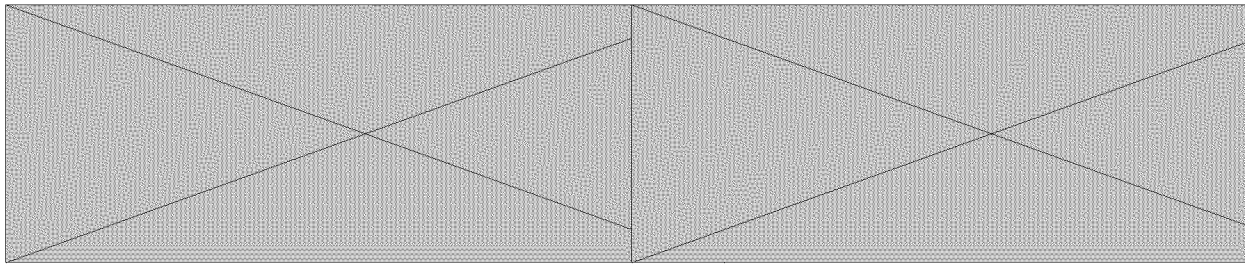
4:12 am U.S. ET | Jun 13



WEBINARS

» June 18 - Third-Party Sites and Online F&I

» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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. .

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Fri 6/13/2014 8:47:18 PM
Subject: RE: Status update - 2.0L TDI Certification
VW revised 2015 2.0L SCR AECD approval.pdf

See attachment. You can revise the application doc with it.

Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Friday, June 13, 2014 8:48 AM
To: Snyder, Jim
Subject: Status update - 2.0L TDI Certification

Hello Jim,

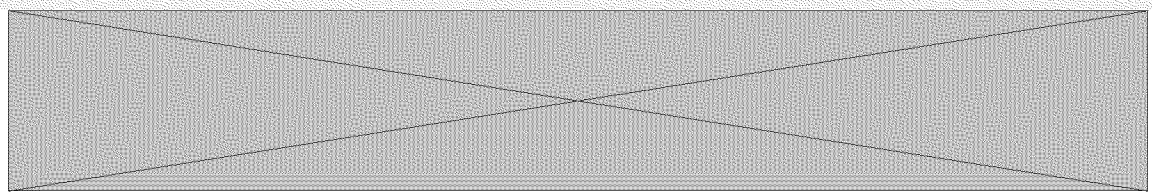
Can you give me an update on the status of a condition certificate for the diesel test group FVGAV02.0VAL. We are drawing near the expected launch dates.

Thanks,

Bill

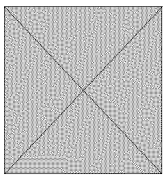
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Sun 6/15/2014 4:02:42 PM
Subject: Green Car Report Daily Headlines

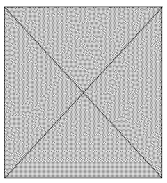
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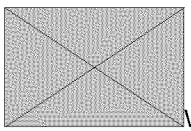
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German Federal Parliament Gets Efficient Audi Diesel Cars For Official Duties

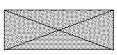
Jun 15, 2014 01:00 pm | feedback@highgearmedia.com (Stephen Edelstein)



World governments are spurring carmakers to lower emissions through stricter regulations, that much we know. But how much effort is there to make the cars lawmakers actually use on the job cleaner? One carmaker sees the importance of that question--or at least a good marketing opportunity. Audi now has a new customer for its TDI diesel luxury...

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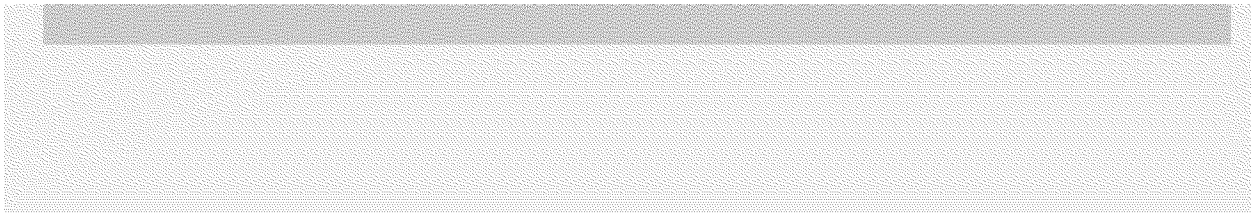
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To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7
Sent: Mon 6/16/2014 1:09:06 PM
Subject: RE: VW PHEV presentation

Hello,

I think there is time at the end of next week, maybe the afternoon June 26 or in the morning on the 27th? ASTM meeting are at the beginning of the week.

Thanks very much

Ex. 7

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Friday, June 13, 2014 11:13 AM
To: Ex. 7
Subject: RE: VW PHEV presentation

Thanks for sending me the presentation. I have also forwarded it to others to review.

Unfortunately next week is not a good time since I will be off-site most of the week. How about some time the week of the 23rd?

_Jim

From: Ex. 7 @vw.com]
Sent: Wednesday, June 11, 2014 9:48 AM
To: Snyder, Jim
Ex. 7
Subject: VW PHEV presentation

Good morning Jim,

Ex. 7 is out of the office this week and wanted me to send this updated PHEV presentation from our folks in Germany.

They would like to have a meeting with you (and possibly Rob?) next week to explain the details.

Do you have an hour or so for us to come see you (and Germany to be on the phone) early in the week?

Thanks very much,

Ex. 7

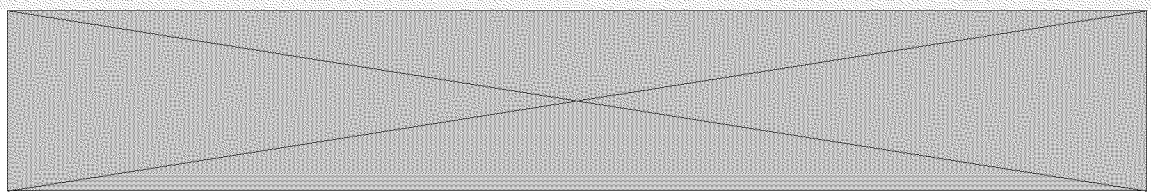
Ex. 7

Thank you,

Ex. 7

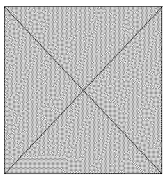
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Mon 6/16/2014 4:04:26 PM
Subject: Green Car Report Daily Headlines

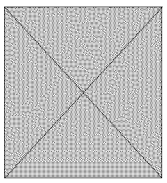
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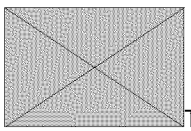
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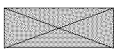
Plug-In SUVs, Audi Electric Turbos, Hybrid Sales Stagnant: Today's Car News

Jun 16, 2014 03:49 pm | feedback@highgearmedia.com (John Voelcker)

 Today on Green Car Reports: We look at when the very popular SUV/crossover segment will get its first plug-in vehicles, Audi confirms it'll use an electric turbocharger, and hybrid sales in the U.S. appear to have peaked--already. All this and more on Green Car Reports. Over the weekend, we looked at a handful of important stories from last week...

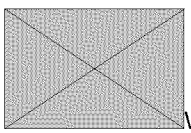
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Nissan Wants In On Tesla, BMW Electric-Car Charging Talks: Report

Jun 16, 2014 03:29 pm | feedback@highgearmedia.com (John Voelcker)

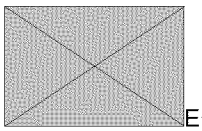
 With modern, mass-market electric cars on sale for three and a half years now, you might think that the path for growth has been pretty much laid out by now. But the great disruptor, Silicon Valley electric-car startup Tesla Motors, may be changing the playbook once again. According to a report in the U.K.'s Financial Times, there's

now a third...

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Next Audi Q7 To Launch Electric Turbocharger For Better Fuel Economy

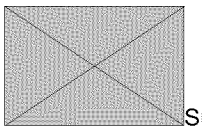
Jun 16, 2014 03:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Electric motors can improve the fuel efficiency of a car--even if they're not driving the wheels. Using electric power to run accessories like power steering lets engineers remove power-sapping accessory drives from engines--and soon, it will even help those engines produce more power from combustion as well. The next-generation Audi Q7 SUV will...

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Could U.S. Hybrid Car Sales Be Peaking Already--And If So, Why?

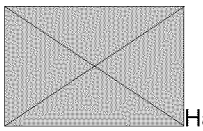
Jun 16, 2014 02:20 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Suppose sales of some type of car or other reached a certain level--and then stayed there, forever. According to a new report, that may already be close to happening in at least one market segment: hybrid-electric vehicles. While the number of different hybrid models offered by the world's automakers has grown significantly over the past five...

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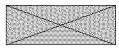
When Will Plug-In Electric SUVs And Crossovers Go On Sale?

Jun 16, 2014 12:31 pm | feedback@highgearmedia.com (John Voelcker)

 Have patience, all you SUV and crossover fans who desperately want one that plugs in and runs electrically. They're coming, but you've got a year to wait--or perhaps a bit less, with luck. Only two vehicles remotely qualify today as plug-in crossovers or SUVs, and neither offers all-wheel drive--a necessity for many, many utility-vehicle buyers...

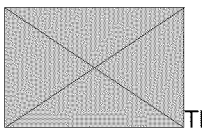
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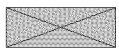
Could Solar Energy Cool Aston Martin Racing Drivers In Future?

Jun 16, 2014 11:30 am | feedback@highgearmedia.com (Stephen Edelstein)

 This past weekend, race teams competed in the 82nd running of the famous 24 Hours of Le Mans endurance race, one of the oldest--and toughest--events in motorsports. For future iterations of Le Mans, and other endurance events, Aston Martin's factory team is investigating a green way to keep its drivers cool under pressure--literally. Aston Martin...

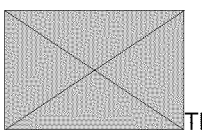
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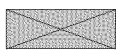
Why An Electric Car Saves Fleet Operators $16,000 In Lifetime Cost

Jun 16, 2014 11:14 am | feedback@highgearmedia.com (Matthew Klippenstein)

 The average car spends about 95 percent of a 24-hour day parked. For the 5 percent that they're driven, they actually spend one-third of the time idling–at red lights, stuck behind leisurely left-turners, or even while the driver waits for the vehicle to warm up (or cool down) before getting in. In other words, private automobiles spend only...

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Update your profile

To: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
From: Good, David
Sent: Tue 6/17/2014 5:05:44 PM
Subject: RE: VW and Porsche MY 2012

Harry,

We don't get information about when the MY 2012 Porsche/VW vehicles were actually imported into the U.S.----e.g. as part of the EPA certification, fuel economy, or GHG requirements.

Just to be sure, I checked both VW & Porsche 2012 CAFE/GHG letters and neither letter went into that much detail.

Dave

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Tuesday, June 17, 2014 11:58 AM
To: Good, David
Subject: FW: VW and Porsche MY 2012

Does EPA have any info, i.e., in the VW and Porsche final reports, to answer Otto's question?

From: Matheke, Otto (NHTSA)
Sent: Tuesday, June 17, 2014 9:49 AM
To: Thompson, Harry (NHTSA)
Subject: VW and Porsche MY 2012

Harry:

Do you know if EPA has any data on when VW and/or Porsche actually imported MY 2012

import passenger cars into the U.S?

If they have this data, could you tell me when the MY 2012 imports were actually brought in the US?

Thanks

Otto Matheke

Senior Attorney

Litigation and Enforcement

202-366-5253

202-366-3820 (FAX)

To: Ex. 7 @vw.com]
From: Wehrly, Linc
Sent: Tue 6/17/2014 7:52:33 PM
Subject: RE: Disel Meeting Tomorrow

That would be great.

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Ex. 7 @vw.com]
Sent: Tuesday, June 17, 2014 3:45 PM
To: Wehrly, Linc
Subject: Disel Meeting Tomorrow

Hello Linc,

Is 1:30 tomorrow afternoon good with you? I'll plan on that but if another time works better let me know. My afternoon is flexible.

Best Regards,

Ex. 7

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Tue 6/17/2014 7:52:55 PM
Subject: RE: Disel Meeting Tomorrow

Ex. 7

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, June 17, 2014 3:53 PM
To: Ex. 7 (EEO)
Subject: RE: Disel Meeting Tomorrow

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Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

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Sent: Tuesday, June 17, 2014 3:45 PM
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Hello Linc,

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Best Regards,

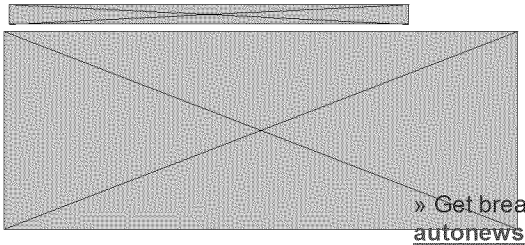
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 6/17/2014 8:35:25 PM
Subject: DAILY: Barra to tell Congress she 'will not rest' until GM fixes problems | Volvo to export China-made cars to U.S., Russia next year | Tesla notches gains in N.J., N.Y.

Today's most read story

Google to reveal operating system that will rival Apple CarPlay

June 17, 2014



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THE GM RECALL

Barra to tell Congress she 'will not rest' until GM fixes problems

11:57 am U.S. ET | Jun 17

General Motors CEO Mary Barra plans to tell members of Congress on Wednesday that the automaker has already taken numerous steps to address safety defects more quickly and that she "will not rest" until GM has fixed the "deep underlying cultural problems" that allowed a deadly flaw in the... ... » READ

Volvo to export China-made cars to U.S., Russia next year, report says

UPDATED: 6/17/14 12:13 pm ET -- adds background

5:26 am U.S. ET | Jun 17

Volvo plans to start exporting Chinese-made cars to the United States and Russia as early as next year,

Reuters reported, citing a Volvo executive. ... » READ

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Navistar Presenting at the TLS Auto Customer Centricity Summit

Driving Customer Value Through Predictive and Behavioral Analytics - Like automotive, a key marketing challenge in the truck industry is identifying in-market customers. Mike Cerilli, VP - Marketing will highlight how Navistar uses predictive and behavioral analytics to identify and engage in-market customers and connect them with their local dealer. For more info visit.

N.J. Assembly OKs bill to allow Tesla direct sales

UPDATED: 6/17/14 12:41 pm ET - adds New York bill signed

8:07 am U.S. ET | Jun 17

The New Jersey Assembly approved a bill to allow consumers to buy electric cars directly from a manufacturer. The bill now heads to the state Senate. Separately, New York Gov. ... » READ

Tesla to start deliveries of Model X crossover early next year

UPDATED: 6/17/14 4:20 pm ET - adds stock close

1:21 pm U.S. ET | Jun 17

Tesla Motors will begin Model X prototype production this fall, and vehicle production for reservation holders is set for early 2015, a company spokeswoman confirmed today. ... » READ

A123 buys Leyden battery tech, which may be used in Chinese parent's EVs

6:48 am U.S. ET | Jun 17

A123 Systems, the battery maker bought by Wanxiang Group after it sought bankruptcy protection in 2012, purchased technology from Leyden Energy that the Chinese parent may use to make electric cars. ...

» READ

Oil boom fuels battle for service techs

UPDATED: 6/17/14 2:39 pm ET -- Correction

12:01 am U.S. ET | Jun 16

MOST READ (Last 7 days)

In North Dakota, Texas, Alaska, Oklahoma and elsewhere, the energy industry's incredible growth since the mid-2000s has forced dealers to innovate to find and keep service technicians. ... » READ

GM to recall 511,528 Camaros for ignition-related defect; 3 other recalls announced

Marchionne insists Fiat Chrysler needs 9 brands; market watchers disagree

Ford lowers mpg estimates on 6 models after internal audit

VW's distracted driving ad attracts 19M views on YouTube

Hail on wheels? No problem as shoppers clamor for deals on damaged cars

Viral video rankings for week of 6/17/2014

VW public service spot a success

12:01 am U.S. ET | Jun 17

The wild success story of the week is Volkswagen's spot "Eyes on the Road," which in one week has garnered 21,191,996 views. ...

» Watch the videos

Bentley crossover uncovered

12:01 am U.S. ET | Jun 16

Group offers used-car powertrain warranty

12:01 am U.S. ET | Jun 16

UPCOMING EVENTS

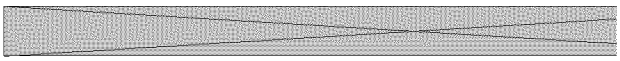
» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

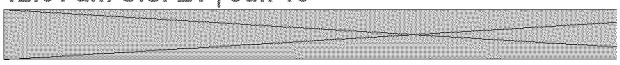
» June 19 - 30 Social Media Tips by Digital Air Strike

» June 24 - Automotive Innovation by IBM



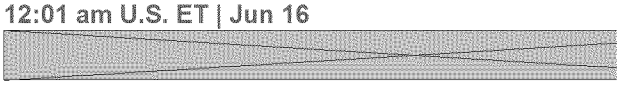
Can Nissan's e-van go the distance?

12:01 am U.S. ET | Jun 16



Luxury may lead wireless EV recharging

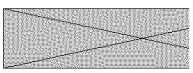
12:01 am U.S. ET | Jun 16



Hitachi Automotive plans its overseas expansion

12:01 am U.S. ET | Jun 16

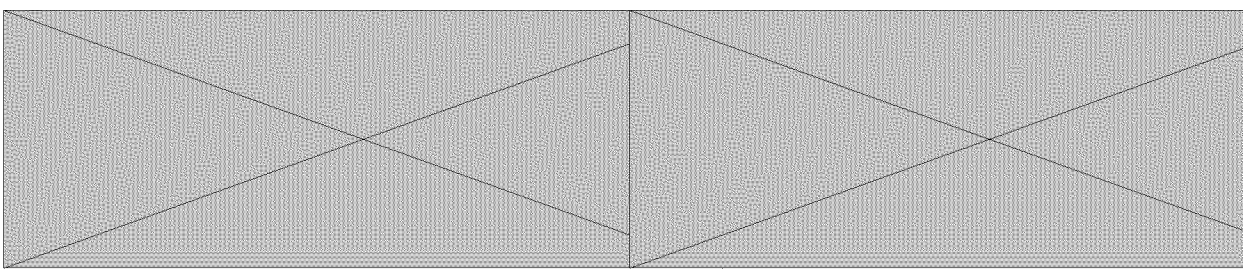




UPCOMING WEBINARS

» June 18 - Third-Party Sites and Online F&I

» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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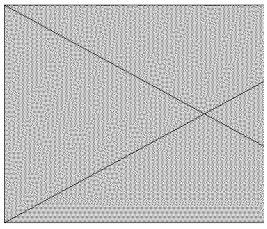
Automotive News | 1155 Gratiot Ave., Detroit, Michigan, 48207

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 6/18/2014 8:00:31 AM
Subject: GM Removed 'Restraints' for Exotic-Killer Chevy Camaro Z/28

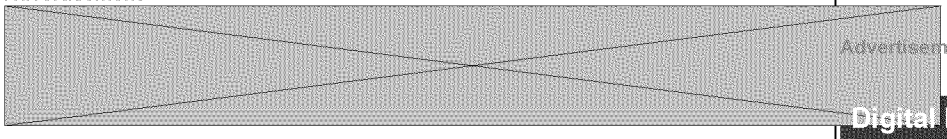
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June 18, 2014



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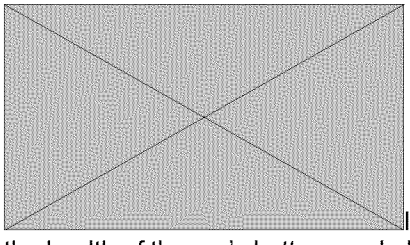
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WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

Nissan Hopes to Expand Capabilities of Carwings



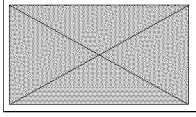
If the Leaf EV's app were able to gauge the health of the car's battery pack, Nissan could avoid incidents like those in Arizona two years ago.

FULL ARTICLE

Advertisement

Optimize performance and product quality, while limiting asset downtime – with analytics.
What if you could confidently predict what is likely to happen next on your production line? What if you could optimize your manufacturing processes and improve product quality, all while lowering costs? Join us on 6/25 and hear how Daimler and IBM are using predictive maintenance to do just this.

Autoline Daily



GM Recalls Another 3.4 Million; Volvo Trucks Adds DCT;

2015 Volkswagen Golf

Auto Industry Back on Solid Ground in U.K., Insiders Say

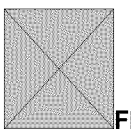
The country is enjoying an export surge, largely attributable to higher manufacturing volumes and the shift toward building higher-quality models that's doubled the average wholesale value of a car from £10,200 to £20,640 over the past decade.

FULL ARTICLE

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Design Tips-12 Essentials for Moldability
Ten years ago, we began publishing Protomold Design Tips to help product developers create better injection-molded plastic parts. We've covered materials, texture, draft, sink and many other design considerations. More than 100 tips later, we remain steadfast in our effort to continue informing designers and engineers in all areas of injection-molded part design. As a resource, we've gathered some of our most useful manufacturing advice from the past decade in a collection of essential tips.

Reliance on New Market Economies a Cautionary Tale

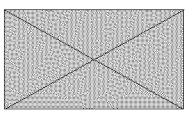
 **FINAL INSPECTION BLOG**
It's no longer enough for a global village to build a car industry. What's needed are responsible governments that value and support their domestic automakers.

FULL ARTICLE

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Improve passenger compartment and seat design with the improved SAE International H-Point Machine The HMP-II defines and locates the standard seating reference point and offers additional leg, shoe, and pedal reference points; lumbar support measurement; easier installation over the SAE HPM-I. Ideal for advanced design/research applications. See video here.

VideoWire

 GM Recall Hits 20 Million; Congress to Explore GM Culture; Only 7% of GM Cars Fixed

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Digital Magazine

GM Removed 'Restraints' for Exotic-Killer Chevy Camaro Z/28

Engineers were encouraged to tap into the latest lightweight and performance technologies, and if a vehicle feature kept the car from going faster and was not required by law, it was stripped out.

FULL ARTICLE

Video: Chevy Camaro Z/28 Takes Nurburgring

GM's top executives lifted traditional vehicle requirements for Chevy Camaro Z/28 to take on world's most popular track-oriented sports cars, and it delivered last year with a 7:37.40 lap of the Nurburgring to eclipse published times of the Porsche 911 Carrera S and the Lamborghini Murcielago LP640.

FULL ARTICLE

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Supply Chain Management: What You Don't See Can Hurt You

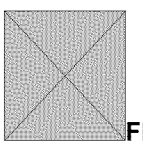
The Japanese earthquake and subsequent tsunami of May 2011 underscored the fragility of the worldwide automotive supply chain. The disasters temporarily closed plants that produced 17 of the top 20 models of Japanese vehicles sold in the U.S. and prompted General Motors to close a plant in Louisiana and a Peugeot plant in Europe, according to a Congressional Research Service study. Learn More

Magna Staffing Up; Making Inroads With Asian OEMs

Areas where Magna is adding staff include program management, sales, marketing, engineering and R&D, James Tobin says.

FULL ARTICLE

Bill Hoglund Dies at 79, Narrowly Missed Top Spot at GM



FINAL INSPECTION BLOG

The former GM executive credited for revitalizing Pontiac in the 1980s once said, "Whoever did the Aztek ought to be shot."

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BMW Vehicles Integrating GoPro Camera Link

The Bavarian automaker partners with GoPro, provider of go-anywhere, do-anything cameras for thrill-seekers, to enable the Ultimate Video Machine.

FULL ARTICLE

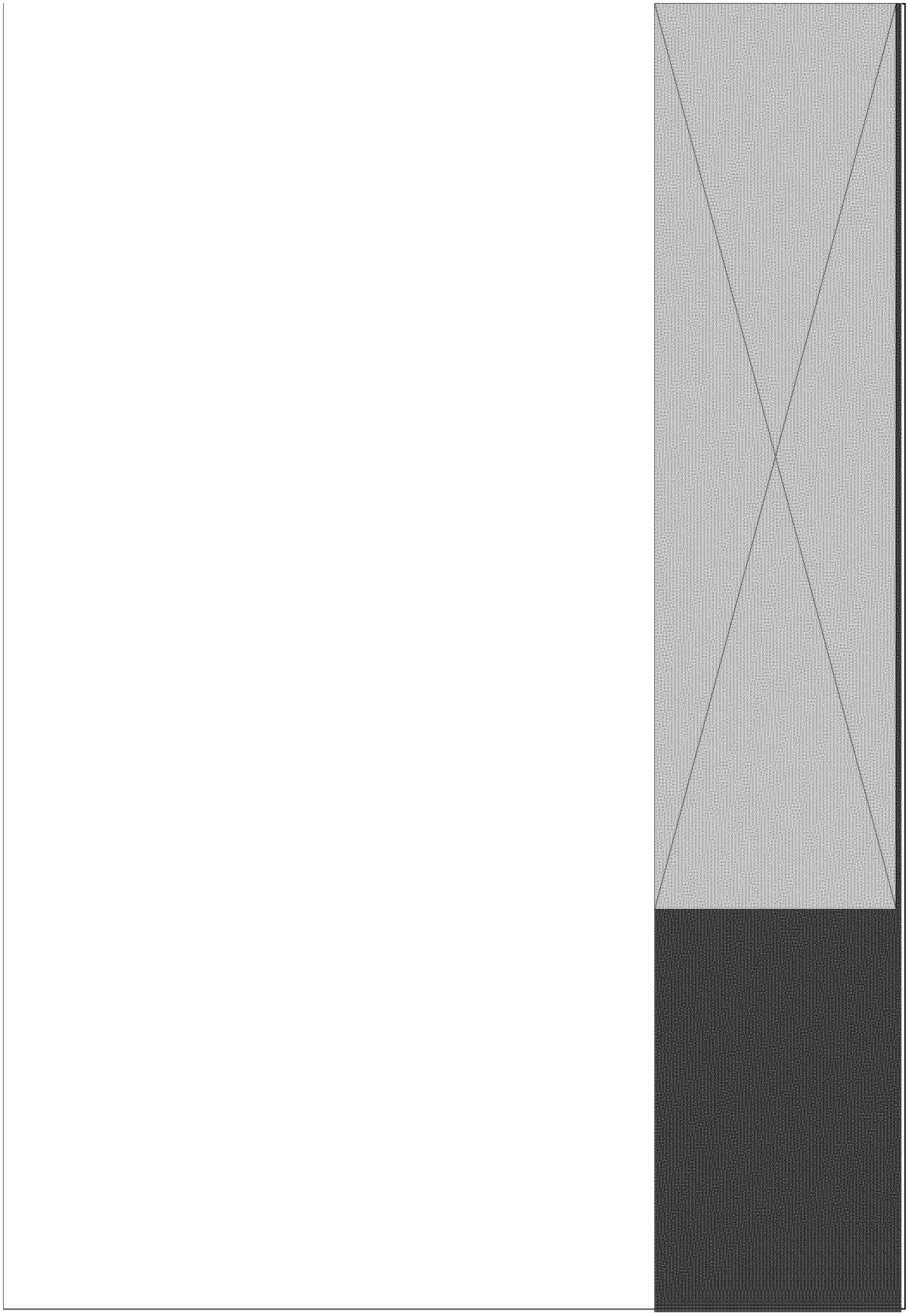
Video: BMW and GoPro at Road America

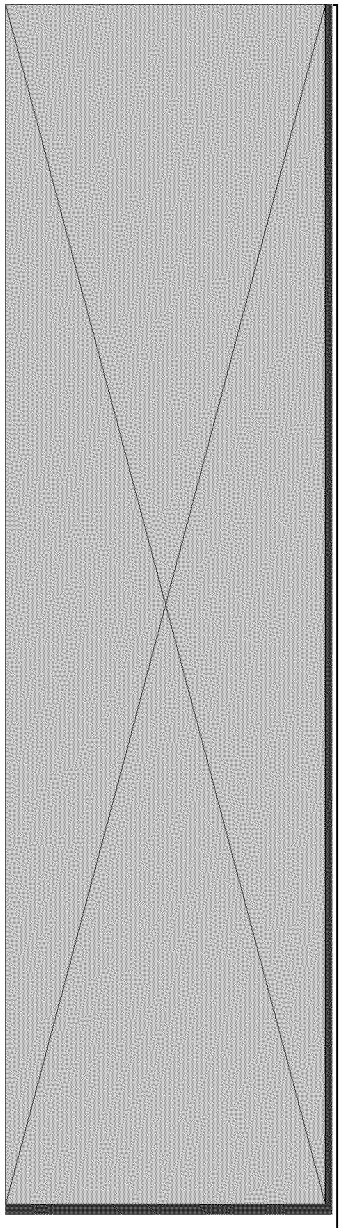
BMW and GoPro have a new relationship allowing the compact, go-anywhere cameras to integrate seamlessly with vehicles such as the new BMW M3 sedan and M4 coupe.

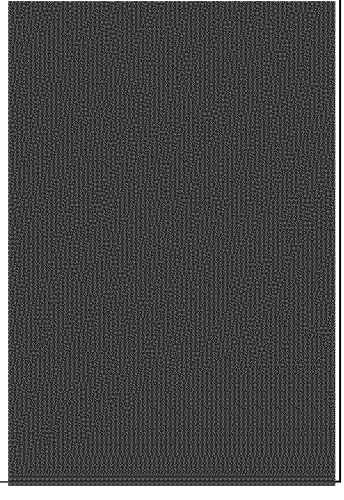
Chrysler 8-Speed Transmission Surpasses 1 Million Installations

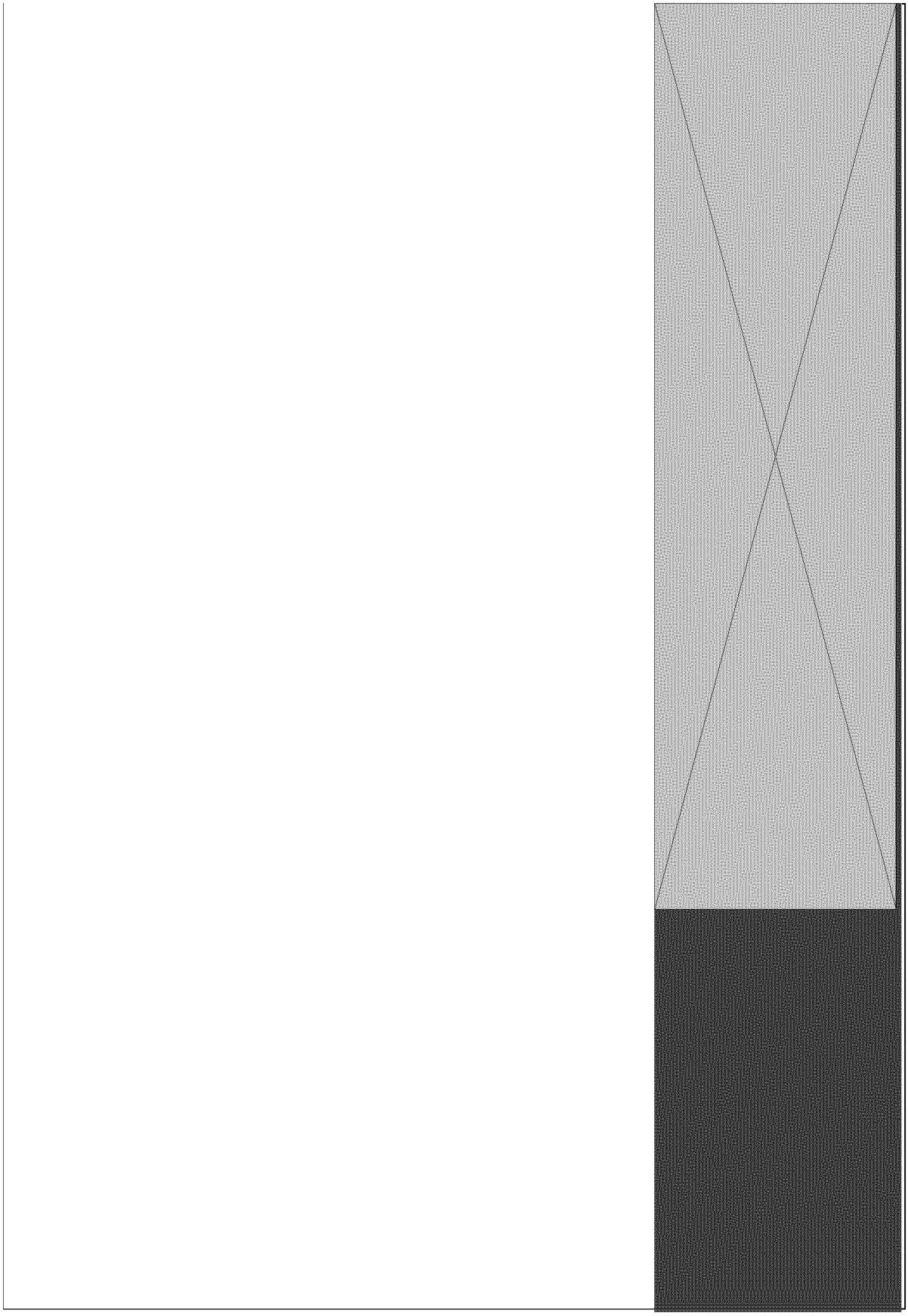
Over the lifetime of the vehicles equipped with the advanced transmission, owners are expected to save more than 700 million gallons of fuel.

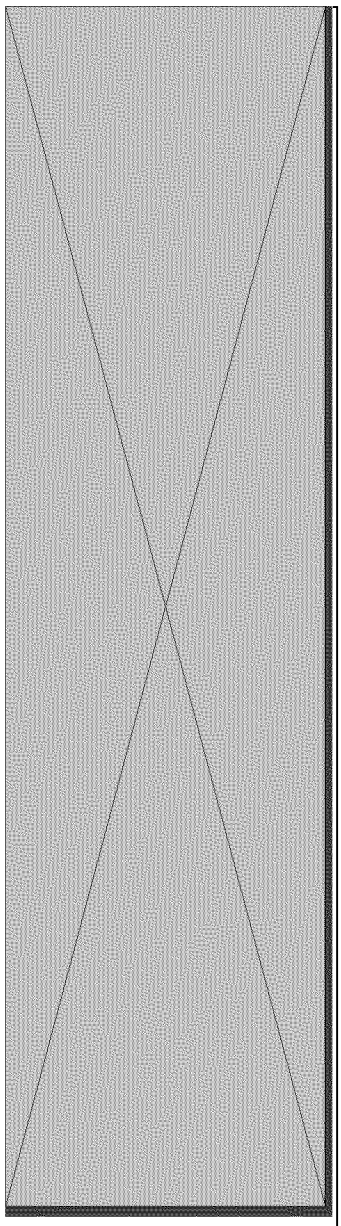
FULL ARTICLE









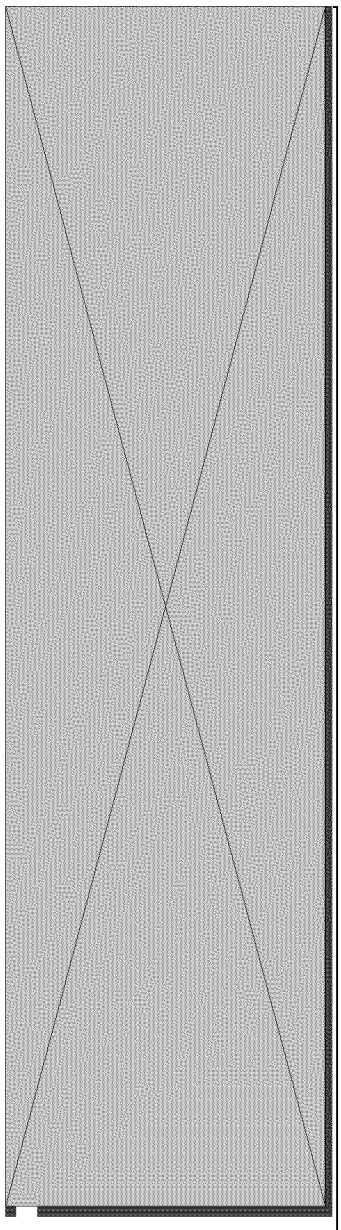


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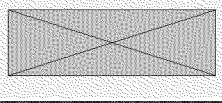
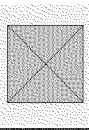
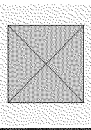
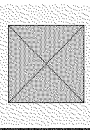
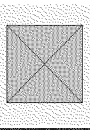
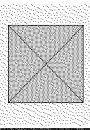
WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even

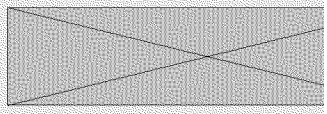


small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper Now!

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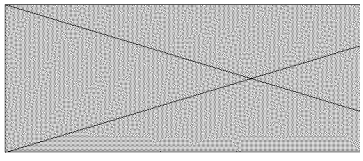
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 6/18/2014 12:56:48 PM
Subject: A.M. NEWSCAST: Cadillac loses another U.S. sales chief | CPO sales on the rise | Land Rover China plans | Audi's robo-technician

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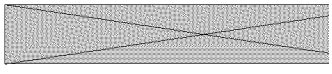
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..

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 6/18/2014 3:02:06 PM
Subject: DIS current common applications

Hi Dave;

We have investigated the information on DIS for several manufactures and did not find common sections of the application for certification much newer that 2007 model year. However, we did find 2014 model year information for manufacture's test groups. Is there an explanation that would explain why these common sections have not been updated?

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]; Buller, Patrick[patrick.buller@volvocars.com]; chris.mccarthy@gm.com[chris.mccarthy@gm.com]; sconrad@hatci.com[sconrad@hatci.com]; tom.beierschmitt@tema.toyota.com[tom.beierschmitt@tema.toyota.com]; mky@chrysler.com[mky@chrysler.com]; dennis.pawlak@na.mitsubishi-motors.com[dennis.pawlak@na.mitsubishi-motors.com]; douglas.reid@na.mitsubishi-motors.com[douglas.reid@na.mitsubishi-motors.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; William Beggs[william.beggs@gm.com]; drm202@chrysler.com[drm202@chrysler.com]; Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]; nokawa@mazdausa.com[nokawa@mazdausa.com]; Duoba, Michael J.[mduoba@anl.gov]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Roxanne Loeffler[rloeffler@sae.org]; mark.a.theobald@gm.com[mark.a.theobald@gm.com]; Dalton, Joel[Dalton.Joel@epa.gov]; Ellies, Ben[ellies.ben@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Alson, Jeff[alson.jeff@epa.gov]
From: Wright, DavidA
Sent: Wed 6/18/2014 8:03:02 PM
Subject: SAE J3066 Task Force Meeting Agenda and Draft Minutes from May 8 Meeting
Agenda J3066 Task Force June 19 2014.docx
J3066 Task Force Draft Minutes 05082014.docx

Attached are the meeting agenda for tomorrow's Task Force meeting along with the draft minutes from the May 8 Task Force meeting. Both documents have also been uploaded to the SAE Standards Works task force work area. Tomorrow's meeting will take place at the EPA offices at 2000 Traverwood, Ann Arbor, MI 48105. The meeting will begin at 1 pm.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

AGENDA

Light-Duty Vehicle Performance Measurement Standards Committee, J3066 Task Force
Chair – J. Glodich
Secretary – N. Yuhase
Thursday, June 19, 2014, 1:00 – 3:00 PM EDT
EPA Office of Transportation and Air Quality, 2000 Traverwood Drive, Ann Arbor, MI 48105
(Office Building)

1. **Welcome and Introductions**

   At the beginning of each meeting the chairman must read the SAE Anti-Trust Statement, the SAE Patent Disclosure Statement, the SAE Transparency Statement and the IP Statement provided below.

2. **Review of the Minutes from Last Meeting (May 22, 2014)**

3. **Membership Review**

4. **Liaison Activities**
   (List activities with sponsor's name)

5. **Document(s) in Need of Five-Year Review**
   J3066: "On-Board Fuel Consumption and Measurement Reporting Standard"
   Sponsor: D. Wright
   Review Draft J3066 Standard Text – D. Wright
   Identification of any SAE standards which could be referenced for determining vehicle distance travelled – J. Glodich
   Evaluating accuracy of existing DIC reported Fuel Economy – D. Wright

6. **Old Business**

7. **New Business**

8. **Next Meeting**
   July 14, 2014 (proposed)

IMPORTANT NOTE: Please be sure to provide the minutes and all attachments to the minutes in electronic format to SAE Staff.

Anti-Trust Statement: In discharging their responsibilities, members of the Technical Standards Board, Councils/Division, and Technical Committees function as individuals and not as agents or representatives of any organization with which they may be associated, except that government employees participate in accordance with governmental regulations. Members are appointed to SAE Technical Committees on the basis of their individual qualifications which enable them to contribute to the work of the Committee.

Patent Disclosure: Each SAE Technical Committee or SAE working group member would be required to disclose at specified times during a development process all patents and patent applications that are owned, controlled or licensed by the member, member's employer or third party and that the member believes may become essential to the draft specification under development. The member would make this disclosure based on the member's good faith and reasonable inquiry. If SAE International receives a notice that a proposed SAE Technical Report may require the use of an invention claimed in a patent, the respective part of the SAE Technical Standards Board Policy will be followed.

Transparency Statement: This Technical Committee/Task Force is committed to transparency at the highest level. All topics are discussed in open meetings and decisions are consensus based (not unanimous). Committee/Task Force members are required to be vigilant in their efforts to monitor Committee/Task Force activities and decisions by actively participating in the Committee/Task Force. Any issues with the transparency of this Committee/Task Force not resolved by the Committee/Task Force Chairman should be brought to the attention of the SAE for resolution.

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As a participant in SAE Technical Committees, individuals agree that the collective work of the committee(s) is the property of SAE, and SAE is charged with its publication, dissemination, and protection.

Light-Duty Vehicle Performance Measurement Standards Committee
J3066 On-Board Fuel Consumption Measurement and Reporting Task Force

Thursday, May 8, 2014
1:00 – 3:00 PM
EPA, Office of Transportation and Air Quality, Ann Arbor

These minutes are for the use of the committee and the J3066 task force.
Unless authorized by SAE, they should not be published or further circulated.

UNCONFIRMED MINUTES

Task Force Members Present	Task Force Members Absent
T. Chang	R. McGavock
D. Pawlak	C. McCarthy
D. Reid	S. Conrad
C. Paulina	N. Yuhase
N. Okawa	M. Yassine
J. Glodich	W. Beggs
T. Beierschmitt	C. Nevers
N. Okawa (phone)	J. Sigelko
P. Buller (phone)	M. Duoba

SAE Staff	Guests Present
R. Loeffler (phone)	Y. Sato

1. Welcome and Introductions

2. Review of the Minutes from Last Meeting (April 4, 2014)

3. Membership Review

4. Document Review

4.1 J3066 – On-Board Fuel Consumption Measurement and Reporting Standard
2.1.1 Sponsor: David Wright
2.1.2 Proposed to create a standardized method for calculating and reporting vehicle fuel consumption on the vehicle's information display. Manufacturer use of the standard would provide vehicle owners and testing organizations an option to compare consumption between vehicles knowing the calculation methodology is consistent.
2.2 Reviewed Discussion Topics
2.2.1 Distance Travelled Methodology.
2.2.1.1 It appears that there maybe some relevant SAE standards as there is an SAE Odometer and Speedometer Standards Committee. J. Glodich offered to research the topic and report back to

the Task Force.

2.2.2 MPG and MPGe Calculation Methodologies.

2.2.2.1 Reviewed and discussed the initial draft of the MPG/MPGe Calculation Methodology. The question was raised for gasoline-fueled vehicles if the purge flow would need to be included in the delivered fuel calculation. Currently only the liquid fuel quantity is calculated. D. Wright committed to expanding the gasoline-fueled engine calculation methodology to include the generic 'speed-density' and 'mass air flow' equations.

2.2.2.2 R. Loeffler offered to provide (and has provided) a copy of the call for experts form which will allow the Task Force to request assistance with the detailed equations for calculating fuel consumption for other fuels.

2.2.3 Evaluating the Accuracy of the Proposed Calculation Methodologies.

2.2.3.1 Discussed using the federal test procedure (FTP), highway fuel economy (HFET), and US06 tests as a basis for comparing the on-board vehicle fuel consumption display. The on-board fuel consumption display is reset before the test and the fuel economy is recorded at the completion of each test. The on-board displayed fuel economy recorded at the end of each test is compared to the fuel economy calculated using the carbon-balance method from the exhaust emissions test. D. Pawlak indicated they had begun testing vehicles using this procedure. It was suggested that EPA could use this method as part of the on-going surveillance testing of manufacturer's vehicles. These data could be used to determine what if any significant differences exist between the different manufacturers and results obtained during emission testing.

2.2.3.2 A discussion ensued regarding developing a database of test results which would be compiled but would not indicate the vehicle or manufacturer only the results of the testing. R. Loeffler indicated that SAE has a service which could be used for this task. R. Loeffler provided D. Wright with a powerpoint document describing the service.

2.2.3.3 It was also discussed that the standard could include an option for a manufacturer to use their own method as long as the method used would correlate within a given percentage of the fuel economy measured during the FTP, HFET, and US06 carbon balance fuel economy results.

2.2.4. Drive Quality Metric.

2.2.5 Draft J3066 Standard Text.

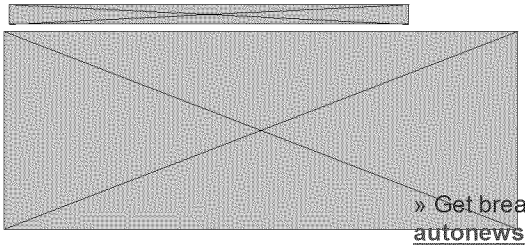
2.2.5.1 R. Loeffler has provided to D. Wright the new template for the J3066 standard and a copy of the SAE Style Manual. D. Wright has committed to beginning a draft of the standard and a write-up of the purpose.

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Wed 6/18/2014 8:41:13 PM
Subject: DAILY: Chrysler vehicles investigated for ignition switch issues | GM whistleblower was told to 'not find every problem' | Why recent mpg downgrades are so troubling | More coverage of GM hearing

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June 18, 2014



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1:36 pm U.S. ET | Jun 18

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12:01 am U.S. ET | Jun 16

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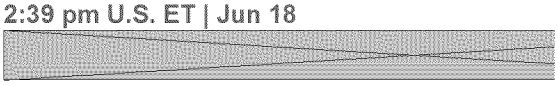
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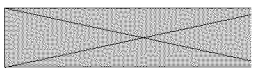


Lawsuit says GM owners owed around $10 billion in lost value after recalls

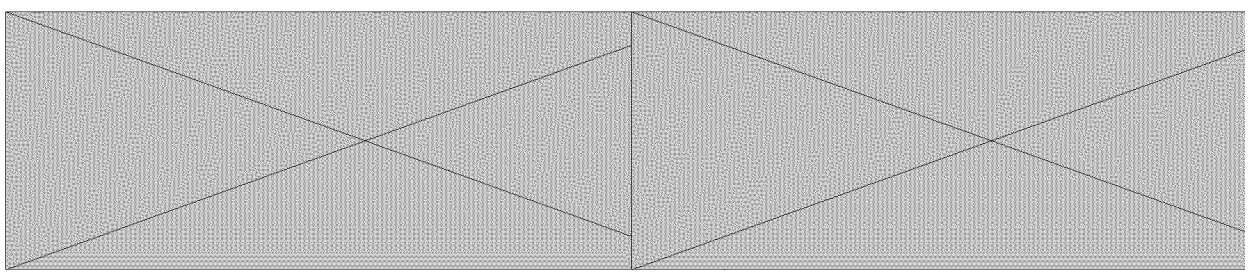
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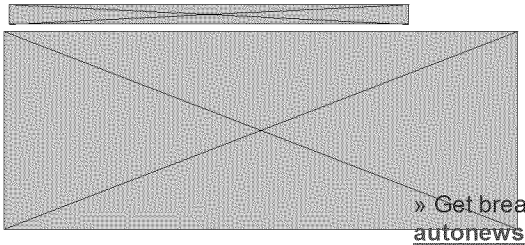
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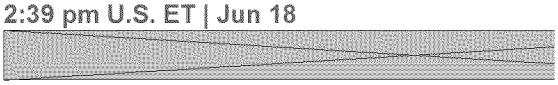
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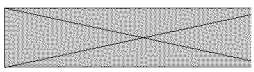


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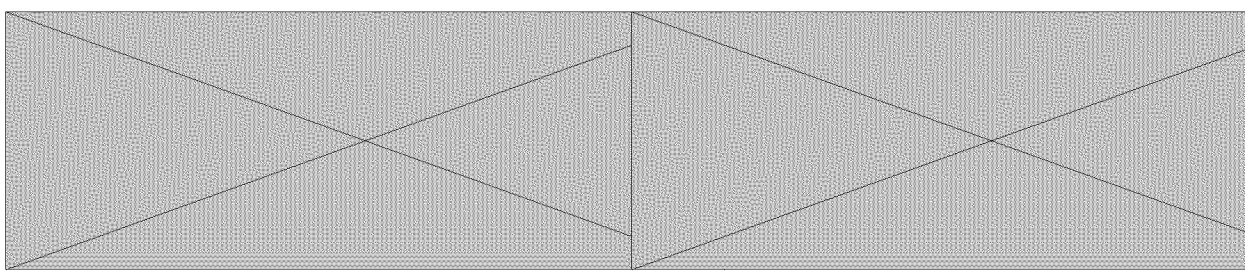
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To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Wed 6/18/2014 9:32:51 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of June 17, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-6-17-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of June 17, 2014

Attached are the data in Verify as of June 17, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on June 23, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen	Audi	A3	VGA 7	1.8	4
		2015 Volkswagen	Audi	A3 Cabriolet	VGA 6	1.8	4
		2015 Volkswagen	Audi	A3 Cabriolet quattro	VGA 5	2.0	4
		2015 Volkswagen	Audi	A3 quattro	VGA 4	2.0	4
		2015 Volkswagen	Audi	A4	VGA 46	2.0	4
		2015 Volkswagen	Audi	A4 quattro	VGA 64	2.0	4
		2015 Volkswagen	Audi	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen	Audi	A5 Cabriolet quattro	VGA 66	2.0	4
		2015 Volkswagen	Audi	A5 quattro	VGA 65	2.0	4
		2015 Volkswagen	Audi	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen	Audi	A6	VGA 47	2.0	4
		2015 Volkswagen	Audi	A6 quattro	VGA 48	2.0	4
		2015 Volkswagen	Audi	A6 quattro	VGA 72	3.0	6
Diesel;		2015 Volkswagen	Audi	A6 quattro	VGA 17	3.0	6
		2015 Volkswagen	Audi	A7 quattro	VGA 71	3.0	6
Diesel;		2015 Volkswagen	Audi	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen	Audi	A8	VGA 40	3.0	6
		2015 Volkswagen	Audi	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen	Audi	A8L	VGA 15	3.0	6
		2015 Volkswagen	Audi	A8L	VGA 41	3.0	6
		2015 Volkswagen	Audi	A8L	VGA 10	4.0	8
		2015 Volkswagen	Audi	A8L	VGA 14	6.3	12
		2015 Volkswagen	Audi	allroad quattro	VGA 68	2.0	4
		2015 Volkswagen	Audi	Q3	VGA 62	2.0	4
		2015 Volkswagen	Audi	Q3 quattro	VGA 37	2.0	4
		2015 Volkswagen	Audi	Q5	VGA 67	2.0	4
		2015 Volkswagen	Audi	Q5	VGA 70	3.0	6
Diesel;		2015 Volkswagen	Audi	Q5	VGA 16	3.0	6
Hybrid;		2015 Volkswagen	Audi	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen	Audi	Q7	VGA 12	3.0	6
		2015 Volkswagen	Audi	Q7	VGA 51	3.0	6
		2015 Volkswagen	Audi	R8	VGA 27	4.2	8
		2015 Volkswagen	Audi	R8	VGA 29	4.2	8
		2015 Volkswagen	Audi	R8	VGA 35	5.2	10
		2015 Volkswagen	Audi	R8	VGA 33	5.2	10
		2015 Volkswagen	Audi	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen	Audi	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen	Audi	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen	Audi	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen	Audi	RS5	VGA 30	4.2	8
		2015 Volkswagen	Audi	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen	Audi	RS7	VGA 21	4.0	8
		2015 Volkswagen	Audi	S3	VGA 42	2.0	4
		2015 Volkswagen	Audi	S4	VGA 73	3.0	6
		2015 Volkswagen	Audi	S4	VGA 76	3.0	6
		2015 Volkswagen	Audi	S5	VGA 74	3.0	6
		2015 Volkswagen	Audi	S5	VGA 77	3.0	6
		2015 Volkswagen	Audi	S5 Cabriolet	VGA 75	3.0	6
		2015 Volkswagen	Audi	S6	VGA 20	4.0	8
		2015 Volkswagen	Audi	S7	VGA 19	4.0	8
		2015 Volkswagen	Audi	S8	VGA 9	4.0	8
		2015 Volkswagen	Audi	SQ5	VGA 69	3.0	6

	2015	Volkswagen	Audi Group of	TT Coupe quattro	VGA	2	2.0	4
	2015	Volkswagen	Audi Group of	TT Roadster quattro	VGA	3	2.0	4
	2015	Volkswagen	Bentley Group of	Continental GT	VGA	24	4.0	8
	2015	Volkswagen	Bentley Group of	Continental GT	VGA	43	6.0	12
	2015	Volkswagen	Bentley Group of	Continental GT Convertible	VGA	22	4.0	8
	2015	Volkswagen	Bentley Group of	Continental GT Convertible	VGA	45	6.0	12
	2015	Volkswagen	Bentley Group of	Flying Spur	VGA	23	4.0	8
	2015	Volkswagen	Bentley Group of	Flying Spur	VGA	44	6.0	12
	2015	Volkswagen	Bentley Group of	Mulsanne	VGA	61	6.8	8
	2015	Volkswagen	Bugatti Group of	Veyron	VGA	60	8.0	16
	2015	Volkswagen	Lamborghini Group of	Aventador	VGA	52	6.5	12
	2015	Volkswagen	Lamborghini Group of	Aventador Roadster	VGA	53	6.5	12
	2015	Volkswagen	Lamborghini Group of	Aventador	VGA	54	6.5	12
	2015	Volkswagen	Lamborghini Group of	Huracan	VGA	25	5.2	10
	2015	Volkswagen	Volkswagen Group of	Beetle	VGA	79	1.8	4
	2015	Volkswagen	Volkswagen Group of	Beetle	VGA	78	1.8	4
	2015	Volkswagen	Volkswagen Group of	Beetle	VGA	81	2.0	4
	2015	Volkswagen	Volkswagen Group of	Beetle	VGA	83	2.0	4
	2015	Volkswagen	Volkswagen Group of	Beetle Convertible	VGA	80	1.8	4
	2015	Volkswagen	Volkswagen Group of	Beetle Convertible	VGA	82	2.0	4
	2015	Volkswagen	Volkswagen Group of	Beetle Convertible	VGA	84	2.0	4
	2015	Volkswagen	Volkswagen Group of	CC	VGA	58	2.0	4
	2015	Volkswagen	Volkswagen Group of	CC	VGA	59	2.0	4
	2015	Volkswagen	Volkswagen Group of	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen	Volkswagen Group of	Eos	VGA	36	2.0	4
	2015	Volkswagen	Volkswagen Group of	Golf	VGA	85	1.8	4
	2015	Volkswagen	Volkswagen Group of	GTI	VGA	1	2.0	4
	2015	Volkswagen	Volkswagen Group of	GTI	VGA	8	2.0	4
	2015	Volkswagen	Volkswagen Group of	Jetta	VGA	86	2.0	4
Diesel; Any	2015	Volkswagen	Volkswagen Group of	Passat	VGA	87	2.0	4
	2015	Volkswagen	Volkswagen Group of	Passat	VGA	55	3.6	6
	2015	Volkswagen	Volkswagen Group of	Tiguan	VGA	39	2.0	4
	2015	Volkswagen	Volkswagen Group of	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen	Volkswagen Group of	Touareg	VGA	13	3.0	6
	2015	Volkswagen	Volkswagen Group of	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Auto(S8)	20	29	24				25.8000	40.5630	30.8531
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.6000	39.4000	31.1546
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995
Auto(S8)	17	24	19				20.8000	32.9000	24.9252

Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Manual(M6)	30	44	35	39.4000	62.4000	46.9175
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

hway CO2, we calculate 234; Error in Rounded Adjusted combined CO2, we calculate 293. Please review/verify as n

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	
23.4556	33.3421	27.0673		TC	Turbocharged	AM	Automated Manual- Selectable	6	(e.g. Au	
24.3444	34.5845	28.0867		TC	Turbocharged	AM	Automated Manual- Selectable	6	(e.g. Au	
23.3120	31.5429	26.4136		TC	Turbocharged	AM	Automated Manual- Selectable	6	(e.g. Au	
24.0818	32.6198	27.2970		TC	Turbocharged	AM	Automated Manual- Selectable	6	(e.g. Au	
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable		(e.g. C	
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
20.4020	28.9490	23.5279		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable		(e.g. C	
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8		
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8		
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8		
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8		
20.9913	28.1265	23.6964		TC	Turbocharged	SA	Semi-Automatic	8		
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6		
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6		
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8		
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic	8		
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8		
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8		
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8		
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic	8		
23.1833	30.7065	26.0560		TC	Turbocharged	AM	Automated Manual- Selectable	6	(e.g. Au	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6		
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6		
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8		
16.7285	23.6581	19.2682		SC	Supercharged	SA	Semi-Automatic	8		

22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	SA	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	SA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SA	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	SA	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally A	AMS	Automated	7
9.7957	16.2453	11.9264	G NA	Naturally A	Aspirated	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G NA	Naturally A	AMS	Automated	7
14.0224	20.0427	16.2140	G NA	Naturally A	Aspirated	Automated Manual- Selectable	7 (e.g. Au
24.7637	32.6943	27.7980	TC	Turbocharged	SA	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	SA	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally A	Aspirated	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
25.3353	37.0021	29.5244	TC	Turbocharged	M	Manual	5
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	M	Manual	6
24.6629	33.9684	28.1307	NA	Naturally A	Aspirated	Manual	5
eed 29.8256	43.5614	34.7575	TC	Turbochar	M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally A	Aspirated	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	SA	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SA	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SA	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally A	Aspirated	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV06.3VUM	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT02.0AUH	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAT03.0NU3			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT03.0ALT	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultr
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			86	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	79	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	79	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			86	10		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			91	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			91	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			91	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	81	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	12				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	12				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					94	25
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Not exempt					94	25
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			100	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			100	15		
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			90	28		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					84	17
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					84	17
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	13				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	81	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					94	25
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			86	10		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			90	13		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			90	13		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	13				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	13				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	81	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					94	25
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			100	15		
MPG	Miles per Gallon	Unleaded Recommended	Truck						

MPG	miles per gallon	Not exempt	74	13				
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt	89	11				
MPG	miles per gallon	Not exempt	89	11				
MPG	miles per gallon	Not exempt	86	7				
MPG	miles per gallon	Not exempt	86	7				
MPG	miles per gallon	Not exempt	102	13				
MPG	miles per gallon	Not exempt	102	13				
MPG	miles per gallon	Not exempt			101	11		
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	94	13				
MPG	miles per gallon	Not exempt	94	13				
MPG	miles per gallon	Not exempt	94	13				
MPG	miles per gallon	Not exempt	77	11				
MPG	miles per gallon	Not exempt					93	16
MPG	miles per gallon	Not exempt					93	16
MPG	miles per gallon	Not exempt					93	16
MPG	miles per gallon	Not exempt			94	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Truck						
MPG	miles per gallon	Truck						
MPG	miles per gallon	Truck						
MPG	miles per gallon	Truck						

Annual Fu	EPA Calcu	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2400	2400	CO2 corrections	14	21	16				17.8377
2200	2200								
2400	2400		14	21	16				17.8377
2400	2400	CO2 corrections	14	21	16				17.8377
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2400	2400	engine code corrected and applicable data added	15	21	17				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							
3000	3000								

2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
4400	4400				
3550	3550	Release date change			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
2200	2200				
1950	1950				
2300	2300				
2200	2200				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1750	1750				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1900	1900				
1650	1600				
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

Hwy2	Unit	Comb2	Unit	Hwy2	Unit	Comb2	Unit	Range2	Fuel2 Us	Fuel2 Us	Fuel2 Unit	Fuel2 Unit
SB.												
on changed to #1 for 1.8L engine code CNSB												
L engine code CNTC.												
ed to #2 for 2.0L engine code CNTC, GHG rating corrected												
28.7257	21.5058	14.106	20.5015	16.4096	270	E	Ethanol (E85)	85	MPG	miles per gallon		
28.7257	21.5058	14.106	20.5015	16.4096	270	E	Ethanol (E85)	85	MPG	miles per gallon		
28.7257	21.5058	14.106	20.5015	16.4096	270	E	Ethanol (E85)	85	MPG	miles per gallon		
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E85)	85	MPG	miles per gallon		
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E85)	85	MPG	miles per gallon		

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG miles per gallon

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
2900	439	302	378	2900	SIDI; FFV;	2	24	Compact Cars
				SIDI;	2	24		Compact Cars
2900	439	302	378	2900	SIDI; FFV;	2	23	Subcompact Cars
2900	439	302	378	2900	SIDI; FFV;	2	23	Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Station Wag
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	231		Small SUV 4WD

or engine code CDMA and all TT models.					SIDI;	2	23	Subcompact Cars
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seate
						2	21	Two Seaters
						2	21	Two Seate
					SIDI & PFI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						1	14	Compact Cars
						2	25	Midsize Ca
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

Car/Truck	Calc Appr	Sales Release D	EPA FE Label	Dataset ID	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	2/25/2014	16011		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	16013		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	16012		N	N		
car	Vehicle Specific 5-cycle	1/15/2014	16197		N	N		
car	Derived 5-cycle label	6/9/2014	15670		N	N		
car	Derived 5-cycle label	6/9/2014	16031		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15675		N	N		
car	Derived 5-cycle label	6/9/2014	16033		N	N		
car	Derived 5-cycle label	6/9/2014	16032		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15676		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15673		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15674		N	N		
car	Derived 5-cycle label	6/9/2014	16062		N	N		
car	Vehicle Specific 5-cycle	6/10/2014	15458		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16061		N	N		
car	Vehicle Specific 5-cycle	6/10/2014	15459		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15647		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15385		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15456		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15648		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15386		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15442		N	N		
cars	Derived 5-cycle label	6/9/2014	16217		N	N		
car	Derived 5-cycle label	8/4/2014	16057		N	N		
car	Vehicle Specific 5-cycle	8/4/2014	15650		N	N		
	Derived 5-cycle label	6/9/2014	16034		N	N		
	Vehicle Specific 5-cycle	6/9/2014	16060		N	N		
	Vehicle Specific 5-cycle	6/10/2014	15460		N	N		
	Vehicle Specific 5-cycle	6/9/2014	15999		N	N		
D	Vehicle Specific 5-cycle	6/12/2014	15408		N	N		
D	Derived 5-cycle label	6/9/2014	15711		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15493		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15497		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15601		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15598		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15492		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15496		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15600		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15597		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15589		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15590		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	15577		N	N		
car	Vehicle Specific 5-cycle	8/4/2014	15651		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16064		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16067		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16065		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16068		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16066		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	15576		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	15575		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15400		N	N		
	Vehicle Specific 5-cycle	6/9/2014	16059		N	N		

car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/1/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
car	Vehicle Specific 5-cycle label	7/1/2014	15682	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	N	N
car	Derived 5-cycle label	7/28/2014	16254	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic System
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic System
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, and		SYSTEM
N	N	Engine Code	Y	CTGA. A8	Deactivation	Start Stop Tech	nology, and		
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, and		SYSTEM
N	N	Engine Code	Y	CTGA. A8	Deactivation	Start Stop Tech	nology, and		
N	N	Engine Code	Y	CTNA with 12 cylinder	Deactivation	intake and	Exhaust cam timing is electronically con		
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUC	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hybrid	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y		Continuousl	y intake and exhaust cam adjustment	
N	N	Engine Code	N	: CFS	Y		Continuousl	y intake and exhaust cam adjustment	
N	N	Engine Code	Y	CRDB (RS7)	Deactivation	of cylinder	Con		
N	N	Engine Code	N	CYFB - Audi S3	Y		CONTINUOU	SLY VARIABLE VALVE TIMING -	Audi Valve System - Exhaust
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinder	Con		
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinder	Con		
N	N	Engine Code	Y	CYCA. 6810	Deactivation	of cylinder	Con		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM

| | | |

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									

alves is a valve lift of zero (all valves are closed), the fuel injection and ignition are deactivated and the activation is described

alves is a valve lift of zero (all valves are closed), the fuel injection and ignition are deactivated and the activation is described
tolled and hydraulically adjusted.

1	Lithium Ion	266	5.00	37.0	On-Board

EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves is a valve lift of zero (all valves are closed), the fuel injection and ignition are deactivated and the activation is described
valves only

alves is a valve lift of zero (all valves are closed), the fuel injection and ignition are deactivated and the activation is described
alves is a valve lift of zero (all valves are closed), the fuel injection and ignition are deactivated and the activation is described
alves is a valve lift of zero (all valves are closed), the fuel injection and ignition are deactivated and the activation is described

aust valves on a single camshaft. No change in valve overlaps.

ECHANICAL-HYDRAULIC

ECHANICAL-HYDRAULIC

ECHANICAL-HYDRAULIC

aust valves on a single camshaft. No change in valve overlaps.

ECHANICAL-HYDRAULIC

ECHANICAL-HYDRAULIC

ECHANICAL-HYDRAULIC

AMS

AMS

AMS

AMS

AMS

AMS

AMS

controlled and hydraulically adjusted

controlled and hydraulically adjusted

controlled and hydraulically adjusted

le Conv.

controlled and hydraulically adjusted

controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
Electrical Regen Brake	Both	Y						1	AC Induction
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
h				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
h				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
		40		GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
h				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200

	GDI	Spark Ignition Direct Injection	N	5W40
	GDI	Spark Ignition Direct Injection	N	5W40
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
	MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
	MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
	MFI	Multipoint/s	N	5W30 VW
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
	MFI	Multipoint/s	N	5W30 VW
	GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
	CRDI	Common F	N	5W40 VW
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	50700	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	50700	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500	Auto(AM-S7)	Auto(AM-S7)						
N	50500	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500	Auto(AM-S7)	Auto(AM-S7)						
N	50500	Manual(M6)	Manual(M6)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						

N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
JVW50500	No	Auto(S8)	Auto(S8)	
N 50500	No	Auto(AM-S7)	Auto(AM-S7)	
Y50700	Yes	Auto(AM-S	Auto(AM-S	
Y50700	Yes	Auto(AM-S7)	Auto(AM-S7)	
N50700	No	Auto(AM-S	Auto(AM-S	VENENO
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[illegible]	EPA Calculated Gas G	[illegible]	[illegible] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.0APA	9		
36.2		7	7	FVGAV02.0APA	9		
34.3		6	6	FVGAV02.0APA	9		
35.2		7	7	FVGAV02.0APA	9		
35.4		7	7	FVGAV02.0AUB	5		
30.9		6	6	FVGAJ02.0AUF	5		
33.1		6	6	FVGAV02.0AUB	5		
30.9		6	6	FVGAJ02.0AUF	5		
30.9		6	6	FVGAJ02.0AUF	5		
33.1		6	6	FVGAV02.0AUB	5		
36.9		7	7	FVGAV02.0AUB	5		
30.0		5	5	FVGAV02.0AUB	5		
28.1		5	5	FVGAJ03.0AUD	5		
37.7		7	6	FVGAJ03.0NU4	5		
27.9		5	5	FVGAJ03.0AUD	5		
37.7		7	6	FVGAJ03.0NU4	5		
28.8		5	5	FVGAV03.0AUE	5		
28.0		5	5	FVGAV04.0NUA	5		
36.9		7	6	FVGAJ03.0NU4	5		
28.8		5	5	FVGAV03.0AUE	5		
27.6		5	5	FVGAV04.0NUA	5		
21.1		4	4	FVGAV06.3VUM	5		
31.2		6	6	FVGAJ02.0AUF	5		
30.0		5	5	FVGAV02.0AUA	5		
29.5		5	5	FVGAV02.0AUA	5		
29.6		5	5	FVGAJ02.0AUF	5		
27.2		5	5	FVGAJ03.0AUD	5		
34.3		7	5	FVGAJ03.0NU4	5		
34.0		6	6	FVGAT02.0AUH	5		
28.1		5	4	FVGAT03.0NU3	5		
23.1		4	4	FVGAT03.0ALT	5		
20.7		4	4	FVGAV04.2NLC	5		
17.2		2	2	FVGAV04.2NLC	5		
19.6		3	3	FVGAV05.2NLD	5		
17.0		2	2	FVGAV05.2NLD	5		
20.7		4	4	FVGAV04.2NLC	5		
17.2		2	2	FVGAV04.2NLC	5		
19.6		3	3	FVGAV05.2NLD	5		
17.0		2	2	FVGAV05.2NLD	5		
22.8		4	4	FVGAV04.2NLB	5		
22.6		4	4	FVGAV04.2NLB	5		
24.1		4	4	FVGAV04.0NUA	5		
33.2		6	6	FVGAV02.0AUA	5		
26.9		5	5	FVGAJ03.0AUD	5		
23.5		5	5	FVGAJ03.0AUD	5		
26.9		5	5	FVGAJ03.0AUD	5		
23.5		5	5	FVGAJ03.0AUD	5		
26.4		5	5	FVGAJ03.0AUD	5		
25.4		5	5	FVGAV04.0NUA	5		
25.4		5	5	FVGAV04.0NUA	5		
25.0		5	5	FVGAV04.0NUA	5		
24.9		4	4	FVGAJ03.0AUD	5		

33.3	[redacted]	6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.	5
14.6		1	1 FVGAV06.5LLR	5
15.8		1	1 FVGAV06.	5
20.0		3	3 FVGAV05.2NLE	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
33.1		6	6 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
33.1		6	6 FVGAV02.0VPD	7
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
39.3		7	7 FVGAV02.0APA	9
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
35.9		7	7 FVGAV02.0VUC	5
46.9		8	7 FVGAV02.	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

| | | |

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 F	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	435	307	377			
	0		398	277	343			
		1000	435	307	377			
		1000	435	307	377			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1000	421	315	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2000	496	347	429			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		2500	488	321	413			
		3250	519	341	439			
		2500	488	321	413			
		3250	519	341	439			
		2500	500	341	428			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			
		4000	528	373	458			

0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	11000	831	523	692
	6750	629	441	544
1500		357	270	318
1250		372	270	326
0		377	302	343
0		393	292	347
1250		369	274	326
	500	392	314	357
0		393	292	347
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2250		350	240	300
750		358	271	319
750		355	258	311
1500		357	259	313
3000		340	242	296
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	Combined CO2 value as shown on Label	240V Char	120V Char
309.0	191.0	255.9	378.7	267.1	328.5
289.0	188.0	243.6	362.1	255.5	314.1
305.0	200.0	257.8	378.6	280.1	334.3
294.0	198.0	250.8	366.0	271.0	323.2
292.0	199.0	250.2	373.7	280.2	331.6
344.0	218.6	287.6	435.1	306.6	377.3
321.2	202.4	267.7	398.0	276.6	343.4
344.0	218.6	287.6	435.1	306.6	377.3
344.0	218.6	287.6	435.1	306.6	377.3
321.2	202.4	267.7	398.0	276.6	343.4
282.0	189.0	240.2	360.0	272.0	320.4
358.0	219.0	295.4	452.0	306.0	386.3
383.5	233.0	315.8	481.7	326.0	411.6
331.0	194.0	269.4	415.7	267.3	348.9
385.0	236.0	318.0	492.9	320.9	415.6
331.0	194.0	269.4	415.7	267.3	348.9
376.5	225.0	308.3	473.4	302.9	396.7
391.0	224.0	315.9	483.9	299.0	400.7
339.0	198.0	275.6	425.6	280.1	360.1
376.5	225.0	308.3	473.4	302.9	396.7
396.0	226.0	319.5	492.3	309.7	410.1
515.0	310.0	422.8	640.3	403.3	533.6
332.0	225.0	283.9	420.9	315.2	373.3
357.5	223.0	297.0	451.0	312.5	388.7
357.0	230.0	299.9	445.6	315.7	387.1
358.0	230.0	300.4	451.6	321.9	393.2
390.0	251.0	327.4	496.0	347.0	429.0
348.0	231.0	295.4	430.5	328.5	384.6
380.0	223.0	309.4	369.0	298.0	337.0
446.0	260.0	362.3	541.0	369.0	463.6
458.0	295.0	384.6	569.6	409.5	497.6
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
466.0	296.0	389.5	562.0	379.0	479.6
463.0	307.0	392.8	558.0	398.0	486.0
467.0	253.0	370.7	573.0	336.1	466.4
311.0	214.0	267.4	381.4	289.2	339.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
427.0	269.0	355.9	528.0	372.7	458.1

312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
708.0	392.0	565.8	831.0	523.0	692.4
524.0	346.0	443.9	628.6	441.0	544.2
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
322.0	206.1	269.8	392.7	291.6	347.2
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
322.0	206.1	269.8	392.7	291.6	347.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
272.0	169.0	225.6	350.1	239.8	300.5
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
302.0	179.0	246.6	356.6	259.3	312.8
261.0	163.0	216.9	340.1	241.6	295.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT_
	N	3.7	3.7			
	N	3.6	3.6			
	N	3.8	3.8			
	N	3.7	3.7			
	N	3.7	3.7			
	N	4.2	4.2			
	N	3.8	3.8			
	N	4.2	4.2			
	N	4.2	4.2			
	N	3.8	3.8			
	N	3.6	3.6			
	N	4.3	4.3			
	N	4.5	4.5			
	N	3.4	3.4			
	N	4.8	4.8			
	N	3.4	3.4			
	N	4.5	4.5			
	N	4.5	4.5			
	N	3.6	3.6			
	N	4.5	4.5			
	N	4.5	4.5			
	N	5.9	5.9			
	N	4.2	4.2			
	N	4.3	4.3			
	N	4.3	4.3			
	N	4.3	4.3			
	N	4.8	4.8			
	N	3.7	3.7			
	N	3.8	3.8			
	N	4.5	4.5			
	N	5.6	5.6			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.6	5.6			
	N	5.6	5.6			
	N	5.3	5.3			
	N	3.8	3.8			
	N	4.8	4.8			
	N	5.0	5.0			
	N	4.8	4.8			
	N	5.0	5.0			
	N	4.8	4.8			
	N	5.0	5.0			
	N	5.0	5.0			
	N	5.0	5.0			
	N	5.3	5.3			

N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	8.3	8.3
N	7.7	7.7
N	6.2	6.2
N	3.6	3.6
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N	3.8	3.8
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N	3.8	3.8
N	4.0	4.0
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N	5.0	5.0
N	4.0	4.0
N	3.3	3.3
N	3.6	3.6
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

EPA_UNRD

| [illegible] | [illegible] | [illegible] |

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7
Sent: Thur 6/19/2014 2:55:01 PM
Subject: e-Golf Testing

Hello Jim:

Thanks for the discussion just now. You referenced page 10 of a handbook that that includes NEMA codes for electrical connections. Perhaps we have seen this handbook and I just don't recall, but is this handbook something available to manufacturers?

Regards,

Ex. 7

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: (2

E-Mail

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 ; Good, David
Optional Attendees: Ex. 7
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM
2015 PHEV calculations _Berechnungsvorlage_02.pptx

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 ; Good, David
Optional Attendees: Ex. 7
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
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2015 PHEV calculations _Berechnungsvorlage_02.pptx

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 ; Good, David
Optional Attendees: Ex. 7 (EEO)
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM
2015 PHEV calculations_Berechnungsvorlage_02.pptx

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 Ex. 7 @vw.com]
Location: AA-Room-Office-C34-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW PHEV label calculation and BEV testing
Start Date/Time: Tue 7/1/2014 5:00:00 PM
End Date/Time: Tue 7/1/2014 6:00:00 PM
2015 PHEV calculations _Berechnungsvorlage_02.pptx

When: Tuesday, July 01, 2014 1:00 PM-2:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-C34-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

From: Snyder, Jim
Required Attendees: Ex. 7
Ex. 7
Location: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW Diesel DEF Refueling Strategy
Start Date/Time: Wed 7/16/2014 5:00:00 PM
End Date/Time: Wed 7/16/2014 6:00:00 PM

When: Wednesday, July 16, 2014 1:00 PM-2:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ex. 7 (EEO); Ex. 7 (EEO); Dalton, Joel; Ball, Joel
Location: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE
Importance: High
Subject: Canceled: VW Diesel DEF Refueling Strategy
Start Date/Time: Wed 7/16/2014 5:00:00 PM
End Date/Time: Wed 7/16/2014 6:00:00 PM

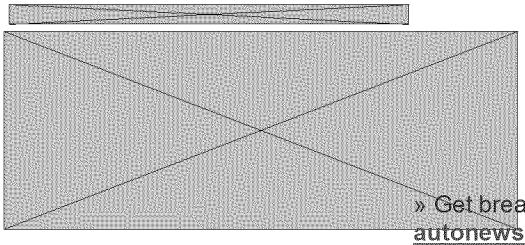
We already discussed the issues in this morning's mtg.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 6/19/2014 8:37:49 PM
Subject: DAILY: Audi's plan for more EVs | Alcoa, Novelis face new competition for auto aluminum | Mercedes to boost Ala. production | 3 takeaways from Barra's return to Capitol Hill

Today's most read story

Hyundai-Kia tops J.D. Power's Initial Quality Study for 1st time

June 19, 2014



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TOP NEWS

Audi draws up plans for range of electric cars, report says

12:23 pm U.S. ET | Jun 19

Audi has drawn up blueprints for a range of high-performance electric cars to help it take on its German rivals and Tesla Motors if the market picks up, sources at the carmaker told Reuters. ... » READ

NEWS ANALYSIS

Alcoa, Novelis face new competition as aluminum gains in auto segment

10:16 am U.S. ET | Jun 19

Aluminum giants Alcoa and Novelis triumphed in landing Ford's aluminum-bodied F-150 pickup truck, but the victory also has brought new aluminum players into the competition for future automotive business. ...
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Navistar Presenting at the TLS Auto Customer Centricity Summit

Driving Customer Value Through Predictive and Behavioral Analytics - Like automotive, a key marketing challenge in the truck industry is identifying in-market customers. Mike Cerilli, VP - Marketing will highlight how Navistar uses predictive and behavioral analytics to identify and engage in-market customers and connect them with their local dealer. For more info visit.

Mercedes plans major hike in Alabama vehicle production

12:01 am U.S. ET | Jun 19

Mercedes plans to "significantly" raise production capacity at its Alabama plant from around 185,000 vehicles, as it adds new models including the new Mercedes C class and an SUV based on the Concept SUV Coupe unveiled at the Beijing auto show earlier this year. ... » READ

Nissan beefs up commercial-van warranty to challenge Detroit 3 loyalty

3:32 pm U.S. ET | Jun 19

Nissan sweetened its sales pitch to Detroit 3 commercial van customers today by instituting an across-the-board 5-year/100,000-mile bumper-to-bumper warranty on its NV full-sized and compact vehicle line. ... » READ

Tesla sets up shop in Dallas -- minus test-drives and sales

4:12 pm U.S. ET | Jun 19

You can touch, but you can't drive, a Model S electric car in the latest Tesla Motors gallery in Dallas' Northpark Mall. Tesla plans to open the doors to its 2,200-square-foot gallery Friday morning in the state with some of the most restrictive auto dealer franchise laws in the country. ... » READ

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Google to reveal operating system that will rival Apple CarPlay

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Cadillac's third U.S. sales chief in 2 years leaves GM

COLUMNS

GABE NELSON

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11:30 am U.S. ET | Jun 19

Tokai Rubber changes name to Sumitomo Riko in push for overseas growth

2:28 pm U.S. ET | Jun 19

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

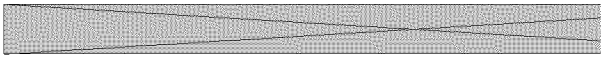
» Oct. 15 - Best Dealerships To Work For

UPCOMING WEBINARS

» June 24 - Automotive Innovation by IBM

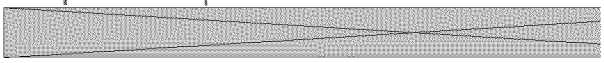
UPCOMING WEBINARS

» July 16 - Plugging the



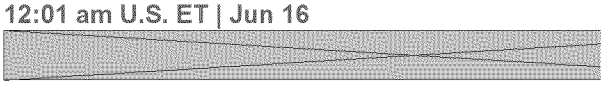
Denso makes changes in North American executive management

4:00 pm U.S. ET | Jun 19



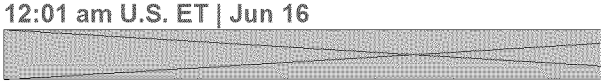
Flying-car ambition soars, but the r&d is fledgling

12:01 am U.S. ET | Jun 16



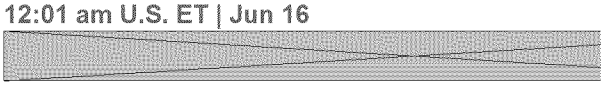
Smartphone app helps set insurance discounts

12:01 am U.S. ET | Jun 16

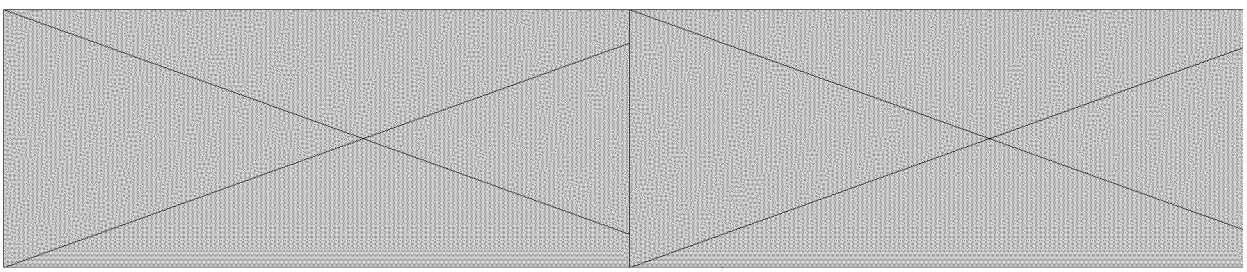


Continental: Automated driving requires many partners

12:01 am U.S. ET | Jun 16



Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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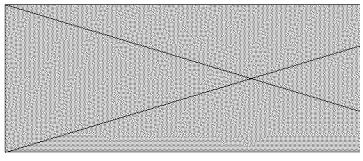
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 6/20/2014 1:11:17 PM
Subject: A.M. NEWSCAST: Chrysler's 'Cinderella' pitch to investors | Hyundai Sonata Eco | More EVs for Audi? | Smart look for Nissan

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June 20, 2014

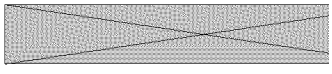
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Automotive News is located at **1155 Gratiot Ave., Detroit, Michigan, 48207**

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To: Good, David[good.david@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
Cc: Anderson, Tom[Anderson.Tom@epa.gov]
From: French, Roberts
Sent: Fri 6/20/2014 3:01:51 PM
Subject: RE: VW - GHG Credit Request for Audi A8 Start/Stop Systems - GHG credits for latching stop-start systems

Ex. 5

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

From: Good, David
Sent: Friday, June 20, 2014 10:32 AM
To: French, Roberts; Wehrly, Linc
Cc: Anderson, Tom
Subject: VW - GHG Credit Request for Audi A8 Start/Stop Systems - GHG credits for latching stop-start systems

Rob & Linc,

Before I forward this over to Chris Lieske, I'll do some digging to see how much authority EPA has for approving GHG credits on the tick list----e.g. can we deny credits for poorly engineered stop-start systems or approve 50% credits for latching stop-start systems?

Dave

From: Ex. 7
Sent: Friday, June 20, 2014 7:49 AM
To: Good, David; Wehrly, Linc
Cc: Ex. 7
Subject: FW: Testing Strategy Approval Request - Audi A8 Start/Stop Systems

Hello David,

hello Linc,

thank you again for the good discussion Wednesday.

I have one more question for you:

In the mail below you granted us a factor of 50% of the Fuel Economy savings for a car that is equipped with a Stop-Start System in a "Last Mode" configuration.

In order to prepare the 2012/2013 Off Cycle application and for future planning of the roll out for Stop-Start would it be acceptable for you if we calculate with 50% of the according Off-Cycle

credit value for each vehicle equipped with a “Last Mode” System ?

Thank you

Ex. 7

Ex. 7

Engineering and Environmental Office

VOLKSWAGEN **Group of America, Inc.**

3800 Hamlin Road
Auburn Hills, MI 48326
Phone
Cell: (
FAX:
E-Mai

Ex. 7

From: David Good [mailto:Good.David@epamail.epa.gov]
Sent: Thursday, May 31, 2012 2:58 PM
To: Ex. 7
Cc: Jim Snyder; Ex. 7 Linc Wehrly; Stephen Healy; William Ott; DavidA Wright; Joel Dalton; Joel Ball
Subject: Re: Testing Strategy Approval Request - Audi A8 Start/Stop Systems

Ex. 7

Background: In a May 8, 2012 meeting, VW/Audi staff presented EPA with a description of the stop/start system and cylinder deactivation system for these 2013 Audi A8 vehicles. The vehicle is equipped with what you called "Last-mode functionality," where the last stop/start setting (enable/disable mode) is restored after stopping and restarting the vehicle. In other words, the stop/start button is "latched" when

stopping and restarting the vehicle. Although I had a conflict on May 8, 2012 and didn't get to drive the vehicle, it's my understanding that the May 8, 2012 drive was acceptable to all EPA engineers who drove it (including both the stop/start feature and the cylinder deactivation feature of the vehicle).

Regarding your current request to perform one test for the Highway, SC03 and Cold FTP cycle (and two sets of FTP and US06 tests----with and without the stop/start system enabled), we believe that your request sounds reasonable to us, and it is hereby approved.

Please call or email me if you have questions about this email.

Regards

Ex. 7 ---05/21/2012 09:02:46 AM---Hello Dave; After our visit with the demonstration 4.0L V8 Audi A8 on May 8th and equipped with cyli

From: Ex. 7
To: David Good/AA/USEPA/US@EPA, Jim Snyder/AA/USEPA/US@EPA
Cc: Linc Wehrly/AA/USEPA/US@EPA, Ex. 7
Date: 05/21/2012 09:02 AM
Subject: Testing Strategy Approval Request - Audi Start/Stop Systems

---

Hello Dave;

After our visit with the demonstration 4.0L V8 Audi A8 on May 8th and equipped with cylinder deactivation and start/stop strategy, we reviewed our testing strategy and have the following request.

The 3.0L V6 engine equipped Audi A8 emission data vehicle tested on May 2nd and May 8th at the EPA facility, was tested in two configurations. That is: complete five cycle tests with start/stop active and a complete second set of tests with start/stop system inactive at our facility in Ingolstadt . EPA confirmed the city tests in both configurations, start/stop active and inactive. Under the start/stop enable conditions you saw during the presentation, it is clear that the engine does not stop during three of the 5-cycle tests. There is no engine shut down in Highway, SC03 and Cold CO test cycles and only marginal engine stop in the US06 test cycle. The current start/stop strategy would yield on minor fuel economy improvement in the FTP and US06 cycle and therefore we would prefer to test only the FTP and US06 harmonically average the two sets of test configurations together at the 50/50 rate.

The high cost testing burden at our facility would be lessened and testing capacity could improve. Until which time there are some operational start/stop system strategy changes, we would propose to test only the FTP and US06 with start/stop active and inactive and average these tests at the 50/50 rate.

If you have any questions, please contact me directly.

Best regards,

Ex. 7
VOLKSWAGEN Group of America, Inc.
3800 Hamlin Road

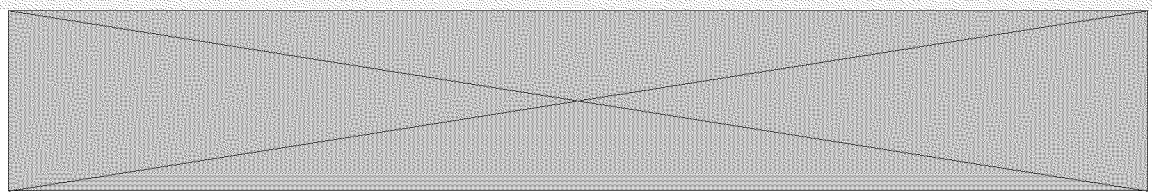
Auburn Hills, MI 48326
Engineering and Environmental Office (EEO)
Phone
Fax:
Richa

Ex. 7

(See attached file: winmail.dat)

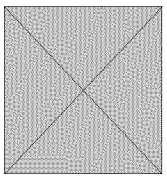
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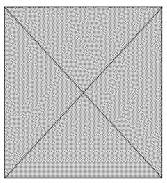
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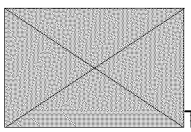
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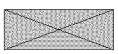
2015 Audi S3 e-Tron, 2015 Hyundai Sonata Eco, Lithium-Ion Degradation: Today's Car News

Jun 20, 2014 03:26 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: The 2015 Audi S3 e-tron plug-in hybrid will launch in Germany this winter, the 2015 Hyundai Sonata Eco debuts, and why lithium-ion batteries degrade over time. All this and more on Green Car Reports. Is a spiffy paint-color option the only green thing about the 2014 Subaru XV Crosstrek Hybrid? Find out in our video...

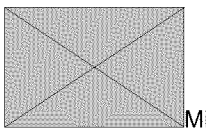
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2015 Hyundai Sonata Eco: 32 MPG Combined From 1.6 Turbo Sedan

Jun 20, 2014 01:30 pm | feedback@highgearmedia.com (Antony Ingram)

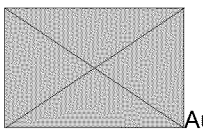
 Mid-size car buyers now have another option if they want to reduce their gas mileage--the 2015 Hyundai Sonata Eco. Joining the Sonata 2.0T and the 2.4-liter model in the range, the Sonata Eco uses a 1.6-liter turbocharged gasoline engine to deliver combined EPA fuel

economy of 32 mpg (28 mpg city, 38 mpg highway). Hyundai says that figure is...

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2015 Audi A3 Sportback e-Tron Plug-In Hybrid On Sale This Winter--In Germany

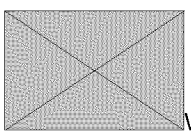
Jun 20, 2014 01:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Audi has promised plug-in models for some time, and towards the end of this year its first production plug-in will finally arrive. The 2015 Audi A3 Sportback e-tron will hit European roads in winter 2014, priced at 37,900 Euros. That's around $51,500 at current exchange rates, or similarly priced to a high-end, diesel-engined version of the A3...

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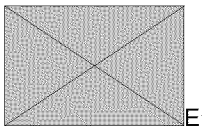
Jun 20, 2014 12:30 pm | feedback@highgearmedia.com (John Voelcker)

 While gasoline versions of the all-new 2015 Audi A3 compact luxury sedan went on sale in April, the model line also includes a TDI diesel version as well as an S3 performance sedan and an A3 Cabrio convertible. Those models will go on sale late this summer, and now pricing has been released for the diesel version. The 2015 Audi A3 TDI will start...

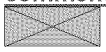
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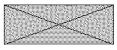
Nissan Leaf Carwings: Company 'Hopes' To Improve Telematics App

Jun 20, 2014 12:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Electric-car drivers rely heavily on in-car telematics and various smartphone apps to monitor their cars' range, plan ahead to avoid "range anxiety," and manage the charging process remotely. Yet the information provided by these systems isn't always as complete as it could be. Carwings, the telematics system built into the Nissan Leaf, has come...

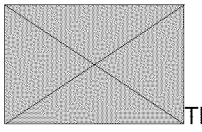
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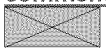


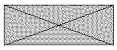
Toyota Aygo Minicar Driven: Much-Improved Scion iQ Alternative U.S. Won't Get

Jun 20, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 The Scion iQ has not been a success story for Toyota's youth-orientated brand. In 2013, just 4,406 iQs found homes in the U.S. That's half as many as were sold in 2012, hardly a stellar year itself. By contrast, Toyota's other small car had a bumper year in 2013. The Aygo minicar moved nearly 60,000 units worldwide, greater than that of the...

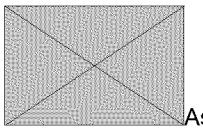
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Why Lithium-Ion Batteries Degrade With Repeated Charging

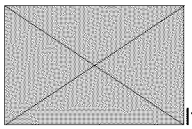
Jun 20, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 As anyone with a smartphone, laptop or indeed a whole electric car will know, lithium-ion batteries degrade over time. Each time you charge and discharge the batteries, they lose a little capacity. Day to day you don't really notice, but over a year, or two, it means being able to use your phone (or car) a little less. Now, research scientists...

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2014 Subaru XV Crosstrek Hybrid: Video Review

Jun 19, 2014 05:08 pm | feedback@highgearmedia.com (John Voelcker)

 It's no secret that Subaru has surged from strength to strength over the last several years. Its sturdy, all-wheel-drive lineup of sedans, hatchbacks, and crossover utilities can be seen on the roads anywhere there's bad weather, mountainous terrain, or active-sports participants. We tested the company's first-ever hybrid model, the 2014 Subaru XV...

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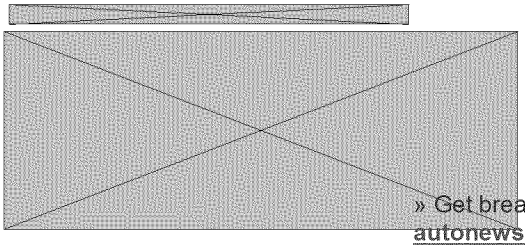
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Takata is investigating excessive moisture as a possible cause of defective airbag inflators that have led to 5.9 million recalls globally this year and last. Today's announcement by one of the world's biggest airbag suppliers echoes the suspicions of safety regulators in the United States. ... » READ

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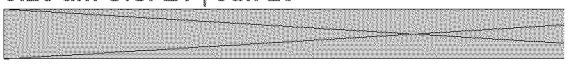
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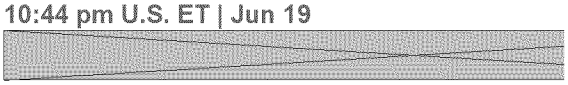
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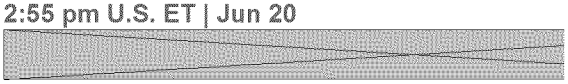
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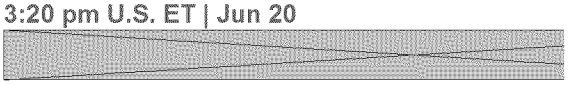
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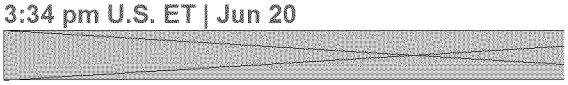
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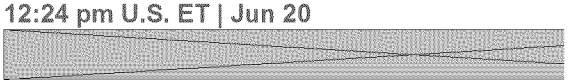
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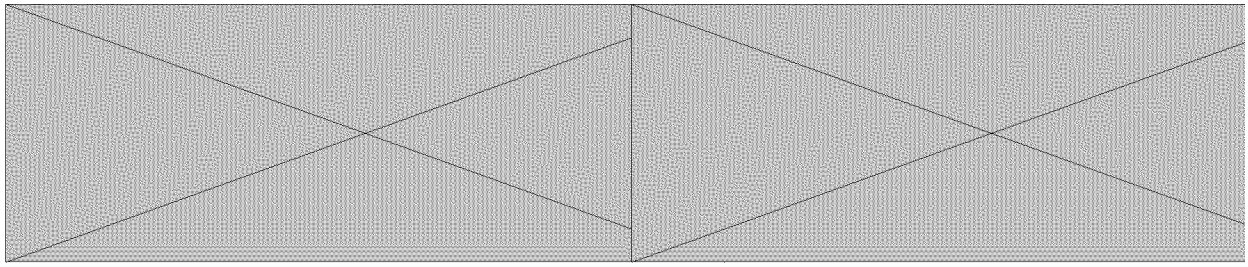


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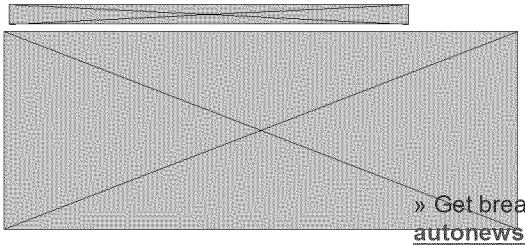
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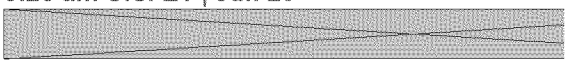
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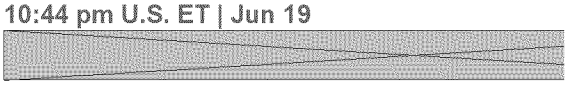
upscale shift

5:25 am U.S. ET | Jun 20



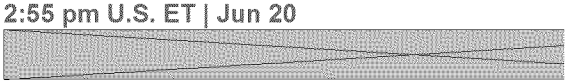
Marchionne pitches Chrysler's 'Cinderella' story to U.S. investors

10:44 pm U.S. ET | Jun 19



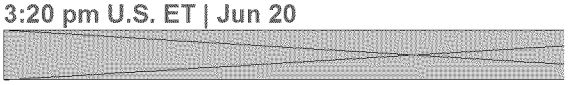
Auto shows' influence on sales, purchase decisions growing again, study says

2:55 pm U.S. ET | Jun 20



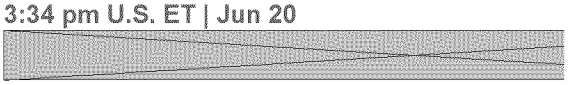
CarMax fiscal Q1 earnings rise 16%

3:20 pm U.S. ET | Jun 20



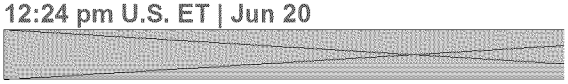
Ford extends SiriusXM traffic, weather service to 5 years on '15 models

3:34 pm U.S. ET | Jun 20



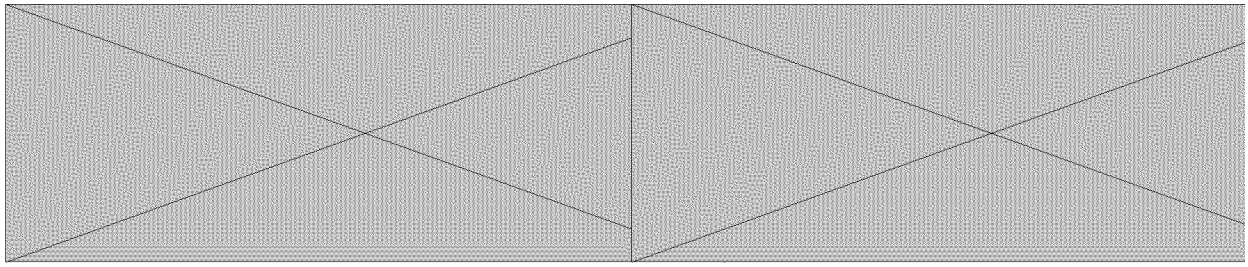
Preh acquires European assembly line design firm

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To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Mon 6/23/2014 3:14:26 PM
Subject: 2015 FE Guide as of Fri (6/20) attached
VW_Group_2015 FEGuide-all rel dates-no-sales-6-20-2014.xlsx

Richard,

Here's the data as is after running the macro. I didn't have time to clean up the data----e.g. add the Veneno to the Aventador carline name, etc. The macro picked up an error in the Diesel Passat.

Call me if questions.

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2015 Volkswage	Audi	A3	VGA	7	1.8	4
		2015 Volkswage	Audi	A3 Cabriol	VGA	6	1.8	4
		2015 Volkswage	Audi	A3 Cabriol	VGA	5	2.0	4
		2015 Volkswage	Audi	A3 quattro	VGA	4	2.0	4
		2015 Volkswage	Audi	A4	VGA	46	2.0	4
		2015 Volkswage	Audi	A4 quattro	VGA	64	2.0	4
		2015 Volkswage	Audi	A4 quattro	VGA	49	2.0	4
		2015 Volkswage	Audi	A5 Cabriol	VGA	66	2.0	4
		2015 Volkswage	Audi	A5 quattro	VGA	65	2.0	4
		2015 Volkswage	Audi	A5 quattro	VGA	50	2.0	4
		2015 Volkswage	Audi	A6	VGA	47	2.0	4
		2015 Volkswage	Audi	A6 quattro	VGA	48	2.0	4
		2015 Volkswage	Audi	A6 quattro	VGA	72	3.0	6
Diesel;		2015 Volkswage	Audi	A6 quattro	VGA	17	3.0	6
		2015 Volkswage	Audi	A7 quattro	VGA	71	3.0	6
Diesel;		2015 Volkswage	Audi	A7 quattro	VGA	18	3.0	6
		2015 Volkswage	Audi	A8	VGA	40	3.0	6
		2015 Volkswage	Audi	A8	VGA	11	4.0	8
Diesel;		2015 Volkswage	Audi	A8L	VGA	15	3.0	6
		2015 Volkswage	Audi	A8L	VGA	41	3.0	6
		2015 Volkswage	Audi	A8L	VGA	10	4.0	8
		2015 Volkswage	Audi	A8L	VGA	14	6.3	12
		2015 Volkswage	Audi	allroad qu	VGA	68	2.0	4
		2015 Volkswage	Audi	Q3	VGA	62	2.0	4
		2015 Volkswage	Audi	Q3 quattro	VGA	37	2.0	4
		2015 Volkswage	Audi	Q5	VGA	67	2.0	4
		2015 Volkswage	Audi	Q5	VGA	70	3.0	6
Diesel;		2015 Volkswage	Audi	Q5	VGA	16	3.0	6
Hybrid;		2015 Volkswage	Audi	Q5 Hybrid	VGA	63	2.0	4
Diesel;		2015 Volkswage	Audi	Q7	VGA	12	3.0	6
		2015 Volkswage	Audi	Q7	VGA	51	3.0	6
		2015 Volkswage	Audi	R8	VGA	27	4.2	8
		2015 Volkswage	Audi	R8	VGA	29	4.2	8
		2015 Volkswage	Audi	R8	VGA	35	5.2	10
		2015 Volkswage	Audi	R8	VGA	33	5.2	10
		2015 Volkswage	Audi	R8 Spyder	VGA	26	4.2	8
		2015 Volkswage	Audi	R8 Spyder	VGA	28	4.2	8
		2015 Volkswage	Audi	R8 Spyder	VGA	34	5.2	10
		2015 Volkswage	Audi	R8 Spyder	VGA	32	5.2	10
		2015 Volkswage	Audi	RS5	VGA	30	4.2	8
		2015 Volkswage	Audi	RS5 Cabrio	VGA	31	4.2	8
		2015 Volkswage	Audi	RS7	VGA	21	4.0	8
		2015 Volkswage	Audi	S3	VGA	42	2.0	4
		2015 Volkswage	Audi	S4	VGA	73	3.0	6

	2015	Volkswage	Audi	S4	VGA	76	3.0	6
	2015	Volkswage	Audi	S5	VGA	74	3.0	6
	2015	Volkswage	Audi	S5	VGA	77	3.0	6
	2015	Volkswage	Audi	S5 Cabriol	VGA	75	3.0	6
	2015	Volkswage	Audi	S6	VGA	20	4.0	8
	2015	Volkswage	Audi	S7	VGA	19	4.0	8
	2015	Volkswage	Audi	S8	VGA	9	4.0	8
	2015	Volkswage	Audi	SQ5	VGA	69	3.0	6
	2015	Volkswage	Audi	TT Coupe c	VGA	2	2.0	4
	2015	Volkswage	Audi	TT Roadste	VGA	3	2.0	4
	2015	Volkswage	Bentley	Continenta	VGA	24	4.0	8
	2015	Volkswage	Bentley	Continenta	VGA	43	6.0	12
	2015	Volkswage	Bentley	Continenta	VGA	22	4.0	8
	2015	Volkswage	Bentley	Continenta	VGA	45	6.0	12
	2015	Volkswage	Bentley	Flying Spur	VGA	23	4.0	8
	2015	Volkswage	Bentley	Flying Spur	VGA	44	6.0	12
	2015	Volkswage	Bentley	Mulsanne	VGA	61	6.8	8
	2015	Volkswage	Bugatti	Veyron	VGA	60	8.0	16
Duplicate eY	2015	Volkswage	Lamborghi	Aventador	VGA	52	6.5	12
Duplicate eY	2015	Volkswage	Lamborghi	Aventador	VGA	54	6.5	12
	2015	Volkswage	Lamborghi	Aventador	VGA	53	6.5	12
	2015	Volkswage	Lamborghi	Huracan	VGA	25	5.2	10
	2015	Volkswage	Volkswage	Beetle	VGA	79	1.8	4
	2015	Volkswage	Volkswage	Beetle	VGA	78	1.8	4
	2015	Volkswage	Volkswage	Beetle	VGA	81	2.0	4
	2015	Volkswage	Volkswage	Beetle	VGA	83	2.0	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	80	1.8	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	82	2.0	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	84	2.0	4
	2015	Volkswage	Volkswage	CC	VGA	58	2.0	4
	2015	Volkswage	Volkswage	CC	VGA	59	2.0	4
	2015	Volkswage	Volkswage	CC 4Motio	VGA	56	3.6	6
	2015	Volkswage	Volkswage	Eos	VGA	36	2.0	4
	2015	Volkswage	Volkswage	Golf	VGA	85	1.8	4
	2015	Volkswage	Volkswage	GTI	VGA	1	2.0	4
	2015	Volkswage	Volkswage	GTI	VGA	8	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	86	2.0	4
	2015	Volkswage	Volkswage	Passat	VGA	88	1.8	4
Diesel; EmY	2015	Volkswage	Volkswage	Passat	VGA	89	2.0	4
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	87	2.0	4
	2015	Volkswage	Volkswage	Passat	VGA	55	3.6	6
	2015	Volkswage	Volkswage	Tiguan	VGA	39	2.0	4
	2015	Volkswage	Volkswage	Tiguan 4M	VGA	38	2.0	4
Diesel;	2015	Volkswage	Volkswage	Touareg	VGA	13	3.0	6
	2015	Volkswage	Volkswage	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.6000	39.4000	31.1546
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S	14	23	17				16.4549	29.7195	20.5904
Manual(M	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S	13	22	16				15.4000	28.8067	19.4796
Manual(M	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S	14	23	17				16.4549	29.7195	20.5904
Manual(M	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S	13	22	16				15.4000	28.8067	19.4796
Manual(M	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S	18	28	21				22.4000	35.8000	26.9372

Manual(M	17	26	20	20.0000	33.4000	24.4063
Auto(AM-S	18	28	21	22.4000	35.8000	26.9372
Manual(M	17	26	20	20.0000	33.4000	24.4063
Auto(AM-S	18	26	21	22.1000	34.7000	26.4165
Auto(AM-S	17	27	20	20.7366	35.2072	25.4423
Auto(AM-S	17	27	20	20.7366	35.2072	25.4423
Auto(S8)	17	27	20	19.9000	36.4000	24.9995
Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(AM-S	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	14	20	16	16.8000	25.5000	19.8471
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S	24	30	26	29.1689	42.3558	33.9213
Manual(M	23	31	26	27.7589	43.4112	33.1352
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S	23	29	25	28.8902	40.8000	33.2591
Manual(M	23	31	26	27.7589	43.4112	33.1352
Auto(AM-S	22	31	25	26.9290	42.1849	32.1632
Manual(M	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S	22	30	25	27.5000	41.5000	32.4219
Manual(M	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S	25	33	28	30.7000	45.3000	35.9078
Manual(M	25	34	28	30.0000	46.4000	35.6740
Manual(M	25	34	28	29.3000	49.6000	35.9145
Manual(M	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S	30	42	34	39.1000	60.2000	46.4219
Manual(M	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

ype Descriptor field to one entry: Please revise Verify as needed.

ype Descriptor field to one entry: Error - sales = 1~5 vehicles. Please revise Verify or call EPA to explain. Please del

Q2 value: Please revise Verify as needed.

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbochar	AMS	Automatec		6
24.3444	34.5845	28.0867		TC	Turbochar	AMS	Automatec		6
23.3120	31.5429	26.4136		TC	Turbochar	AMS	Automatec		6
24.0818	32.6198	27.2970		TC	Turbochar	AMS	Automatec		6
23.6858	31.6788	26.7189		TC	Turbochar	SCV	Selectable		8
21.5783	30.5883	24.8755		TC	Turbochar	SA	Semi-Auto		8
22.1972	32.0693	25.7665		TC	Turbochar	M	Manual		6
19.8843	28.2637	22.9455		TC	Turbochar	SA	Semi-Auto		8
21.5783	30.5883	24.8755		TC	Turbochar	SA	Semi-Auto		8
22.1972	32.0693	25.7665		TC	Turbochar	M	Manual		6
24.5044	32.5529	27.5721		TC	Turbochar	SCV	Selectable		8
19.6106	28.8603	22.9156		TC	Turbochar	SA	Semi-Auto		8
18.3949	27.2332	21.5408		SC	Supercha	SA	Semi-Auto		8
24.4094	38.0485	29.1042		TC	Turbochar	SA	Semi-Auto		8
18.0028	27.5267	21.3226		SC	Supercha	SA	Semi-Auto		8
24.4094	38.0485	29.1042		TC	Turbochar	SA	Semi-Auto		8
18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Auto		8
18.2315	29.5343	22.0244		TC	Turbochar	SA	Semi-Auto		8
23.8727	36.3252	28.2271		TC	Turbochar	SA	Semi-Auto		8
18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Auto		8
17.9485	28.5015	21.5369		TC	Turbochar	SA	Semi-Auto		8
13.8358	21.9706	16.6020	G	NA	Naturally A	SA	Semi-Auto		8
20.9913	28.1265	23.6964		TC	Turbochar	SA	Semi-Auto		8
19.6619	28.5380	22.8617		TC	Turbochar	SA	Semi-Auto		6
19.7028	28.0105	22.7375		TC	Turbochar	SA	Semi-Auto		6
19.6619	27.5771	22.5781		TC	Turbochar	SA	Semi-Auto		8
17.8443	25.5746	20.6536		SC	Supercha	SA	Semi-Auto		8
23.6266	31.3636	26.5783		TC	Turbochar	SA	Semi-Auto		8
24.0075	29.7936	26.3065		TC	Turbochar	SA	Semi-Auto		8
18.7400	27.6200	21.9099		TC	Turbochar	SA	Semi-Auto		8
15.5983	21.6157	17.8322		SC	Supercha	SA	Semi-Auto		8
13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec		7
11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual		6
12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec		7
11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual		6
13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec		7
11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual		6
12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec		7
11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual		6
15.7409	23.3075	18.4339		NA	Naturally A	AMS	Automatec		7
15.8793	22.1836	18.2078		NA	Naturally A	AMS	Automatec		7
15.5443	26.5587	19.1108		TC	Turbochar	SA	Semi-Auto		8
23.1833	30.7065	26.0560		TC	Turbochar	AMS	Automatec		6
18.1170	27.5580	21.4190		SC	Supercha	AMS	Automatec		7

17.0438	26.0230	20.1767	SC	Supercharg	M	Manual	6
18.1170	27.5580	21.4190	SC	Supercharg	AMS	Automatec	7
17.0438	26.0230	20.1767	SC	Supercharg	M	Manual	6
17.6699	25.9530	20.6333	SC	Supercharg	AMS	Automatec	7
16.7533	26.9042	20.1794	TC	Turbochar	AMS	Automatec	7
16.7533	26.9042	20.1794	TC	Turbochar	AMS	Automatec	7
16.5369	26.7008	19.9551	TC	Turbochar	SA	Semi-Auto	8
16.7285	23.6581	19.2682	SC	Supercharg	SA	Semi-Auto	8
22.3665	31.1759	25.6242	TC	Turbochar	AMS	Automatec	6
22.3665	31.1759	25.6242	TC	Turbochar	AMS	Automatec	6
15.2087	25.3816	18.5553	TC	Turbochar	SA	Semi-Auto	8
12.4737	21.0866	15.2827	G	TC	Turbochar	SA	Semi-Auto	8
13.8190	23.8488	17.0447	G	TC	Turbochar	SA	Semi-Auto	8
12.0228	20.0478	14.6643	G	TC	Turbochar	SA	Semi-Auto	8
13.8190	23.8488	17.0447	G	TC	Turbochar	SA	Semi-Auto	8
12.0228	20.0478	14.6643	G	TC	Turbochar	SA	Semi-Auto	8
10.5402	17.7129	12.8889	G	TC	Turbochar	SA	Semi-Auto	8
8.4232	14.7698	10.4424	G	TC	Turbochar	AMS	Automatec	7
10.6055	18.4729	13.1199	G	NA	Naturally A	AMS	Automated	7
10.6353	18.9745	12.7836	G	NA	Naturally A	AMS	Automated	7
9.7957	16.2453	11.9264	G	NA	Naturally A	AMS	Automatec	7
14.0224	20.0427	16.2140	G	NA	Naturally A	AMS	Automatec	7
24.7637	32.6943	27.7980	TC	Turbochar	SA	Semi-Auto	6
23.7579	32.6943	27.0899	TC	Turbochar	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbochar	AMS	Automatec	6
22.6980	30.6082	25.6850	TC	Turbochar	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbochar	SA	Semi-Auto	6
22.7135	28.5529	25.0157	TC	Turbochar	AMS	Automatec	6
22.6980	30.6082	25.6850	TC	Turbochar	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbochar	AMS	Automatec	6
20.6665	31.8238	24.5378	TC	Turbochar	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally A	SA	Semi-Auto	6
21.7634	30.1121	24.8658	TC	Turbochar	AMS	Automatec	6
25.3353	37.0021	29.5244	TC	Turbochar	M	Manual	5
24.6434	32.6158	27.6891	TC	Turbochar	AMS	Automatec	6
24.9095	34.2917	28.4070	TC	Turbochar	M	Manual	6
24.6629	33.9684	28.1307	NA	Naturally A	M	Manual	5
24.1899	35.2585	28.1693	TC	Turbochar	M	Manual	5
29.8946	42.1145	34.3842	TC	Turbochar	AMS	Automated	6
29.8256	43.5614	34.7575	TC	Turbochar	M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally A	AMS	Automatec	6
20.5496	25.7855	22.6161	TC	Turbochar	SA	Semi-Auto	6
20.3807	25.8019	22.5089	TC	Turbochar	SA	Semi-Auto	6
19.6490	28.9961	22.9829	TC	Turbochar	SA	Semi-Auto	8
17.0411	22.7325	19.2048	NA	Naturally A	SA	Semi-Auto	8

ete from the database if vehicles are not offered for sale in the US. Please revise. Verify as needed.

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
MT with pad	dles)	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ02.0	85		422	GP	Gasoline (F
N	N	A	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ02.0	85		389	GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ02.0	85		422	GP	Gasoline (F
N	N	A	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
MT with pad	dles)	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel	IFVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel	IFVGAV03.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAV04.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel	IFVGAV03.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAV04.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAV06.3	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ02.0	85		406	GP	Gasoline (F
Y	N	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ02.0	85		455	GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel	IFVGAT02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAT03.0NU3			5	DU	Diesel, ultr
Y	N	A	All Wheel	IFVGAT03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV04.2	15			GP	Gasoline (F
N	N	A	All Wheel	IFVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV05.2	15			GP	Gasoline (F
N	N	A	All Wheel	IFVGAV05.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV04.2	15			GP	Gasoline (F
N	N	A	All Wheel	IFVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV05.2	15			GP	Gasoline (F
N	N	A	All Wheel	IFVGAV05.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV04.2	15			GP	Gasoline (F
Y	N	A	All Wheel	IFVGAV04.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	IFVGAJ03.0	15			GP	Gasoline (F

N	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAJ03.0	15		GP	Gasoline (F
N	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV04.(	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV02.(	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV02.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	R	2-Wheel DFVGAV06.8	15		GP	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV08.(	15		GPR	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV06.	15		GPR	Gasoline (I
tomated Manual with paddles)			All Wheel IFVGAV06.	15		GPR	Gasoline (I
tomated Manual with paddles)			All Wheel IFVGAV06.5	15		GPR	Gasoline (F
tomated Manual with paddles)			All Wheel IFVGAV05.2	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)			2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)			2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
tomated Manual with paddles)			2-Wheel DFVGAJ02.0	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV03.(	15		GP	Gasoline (F
tomated Manual with paddles)			2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)			2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)			2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
tomated Manual with paddles)			2-Wheel DFVGAV03.(	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAJ02.0	10		GP	Gasoline (F
Y	N	A	All Wheel IFVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAT03.0NU2		5	DU	Diesel, ultr
Y	N	A	All Wheel IFVGAT03.(	15		GP	Gasoline (F

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	miles per ga	Unleaded Recommended)	Not exempt			86	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt	79	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt	79	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt			86	10		
MPG	miles per ga	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt	81	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt	84	12				
MPG	miles per ga	Unleaded Recommended)	Not exempt	84	12				
MPG	miles per ga	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per ga	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per ga	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt			98	16		
MPG	miles per ga	Unleaded Recommended)	Not exempt					94	25
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt					94	25
MPG	miles per ga	Unleaded Recommended)	Not exempt			100	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			100	15		
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			90	28		
MPG	miles per ga	Unleaded Recommended)	Not exempt					84	17
MPG	miles per ga	Unleaded Recommended)	Not exempt					84	17
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	ulfur (15 ppm maximum)	Truck						
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	ulfur (15 ppm maximum)	Truck						
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt	84	13				
MPG	miles per ga	Unleaded Recommended)	Not exempt	81	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt					94	25
MPG	miles per ga	Unleaded Recommended)	Not exempt			86	10		
MPG	miles per ga	Unleaded Recommended)	Not exempt			90	13		

Unleaded Recommended)	MPG	miles per gN	Not exempt			90	13	
Unleaded Recommended)	MPG	miles per gN	Not exempt	84	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	84	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	10			
Unleaded Recommended)	MPG	miles per gN	Not exempt			98	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt					94 25
Unleaded Recommended)	MPG	miles per gN	Not exempt			100	15	
Unleaded Recommended)	MPG	miles per gT	Truck					
Unleaded Recommended)	MPG	miles per gN	Not exempt	74	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt					
Unleaded Recommended)	MPG	miles per gN	Not exempt	89	11			
Unleaded Recommended)	MPG	miles per gN	Not exempt	89	11			
Unleaded Recommended)	MPG	miles per gN	Not exempt	86	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	86	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	102	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	102	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt			101	11	
Unleaded Required)	MPG	miles per gN	Not exempt					
m Unleaded Required)	MPG	miles per gN	Not exempt					
m Unleaded Required)	MPG	miles per gN	Not exempt					
Unleaded Required)	MPG	miles per gN	Not exempt					
Unleaded Recommended)	MPG	miles per gN	Not exempt					
Unleaded Recommended)	MPG	miles per gN	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gN	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gN	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gN	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	77	11			
Unleaded Recommended)	MPG	miles per gN	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gN	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gN	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			102	16	
ulfur (15 ppm maximum)	MPG	miles per gN	Not exempt			102	16	
ulfur (15 ppm maximum)	MPG	miles per gN	Not exempt			102	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			102	16	
Unleaded Recommended)	MPG	miles per gT	Truck					
Unleaded Recommended)	MPG	miles per gT	Truck					
ulfur (15 ppm maximum)	MPG	miles per gT	Truck					
Unleaded Recommended)	MPG	miles per gT	Truck					

Annual Fu	EPA Calcı	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	eng code c	15	22	18				19.5
2200	2200								
2500	2500	eng code c	14	20	16				17.4
2300	2300	eng code c	15	22	18				19.5
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2400	2400	engine coc	15	21	17				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								

2850	2850				
2700	2700				
2850	2850				
2700	2700				
2850	2850	maximum ethanol corrected			
2850	2850	maximum ethanol corrected			
2850	2850	S/S indicator to yes, back to NO.			
3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4400	4400				
4750	4750				
3550	3550	Release date change			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
2200	2200				
1950	1950				
2300	2300				
2200	2200				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1750	1750				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1900	1900				
1900	1900				
1650	1650				
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hwy2 Unr	Comb2 Unr	City2 Unr	Hwy2 Unr	Comb2 Unr	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit

SB.

on changed to #1 for 1.8L engine code CNSB

L engine code CNTC.

ed to #2 for 2.0L engine code CNTC, GHG rating corrected

30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E8	MPG	miles per g
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E8	MPG	miles per g
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E8	MPG	miles per g

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E‹MPG	miles per g
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E‹MPG	miles per g
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E‹MPG	miles per g

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	24		Compact C
2600	400	281	347	2600	SIDI; FFV;	2	24	Compact C
				SIDI;	2	24		Compact C
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompa
2600	400	281	347	2600	SIDI; FFV;	2	23	Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Stati
				SIDI;	2	24		Compact C
				SIDI;	2	24		Compact C
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	25		Midsize Ca
				SIDI;	2	23		Subcompa
				SIDI;	2	24		Compact C

					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	231	Small SUV 4WD
or engine code CDMA and all TT models.					SIDI;	2	23	Subcompa
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seate
					SIDI;	2	24	Compact C
4250	711	410	576	4250	FFV;	2	24	Compact C
					SIDI;	2	23	Subcompa
4250	726	421	589	4250	FFV;	2	23	Subcompa
					SIDI;	2	25	Midsize Ca
4250	726	421	589	4250	FFV;	2	25	Midsize Ca
						1	15	Midsize Ca
						2	21	Two Seate
						2	21	Two Seate
						2	21	Two Seate
						2	21	Two Seate
					SIDI & PFI;	2	21	Two Seate
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
						1	14	Compact C
					SIDI;	2	25	Midsize Ca
						2	25	Midsize Ca
						2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

SC Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	2/25/2014		16011		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		16013		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		16012		N	N		
car	Vehicle Specific 5-cycle	1/15/2014		16197		N	N		
car	Derived 5-cycle label	6/9/2014		15670		N	N		
car	Derived 5-cycle label	6/9/2014		16311		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15675		N	N		
car	Derived 5-cycle label	6/9/2014		16313		N	N		
car	Derived 5-cycle label	6/9/2014		16312		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15676		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15673		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15674		N	N		
car	Derived 5-cycle label	6/9/2014		16062		N	N		
car	Vehicle Specific 5-cycle	6/10/2014		15458		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		16061		N	N		
car	Vehicle Specific 5-cycle	6/10/2014		15459		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15647		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15385		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15456		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15648		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15386		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15442		N	N		
cars	Derived 5-cycle label	6/9/2014		16217		N	N		
car	Derived 5-cycle label	8/4/2014		16057		N	N		
car	Vehicle Specific 5-cycle	8/4/2014		15650		N	N		
	Derived 5-cycle label	6/9/2014		16034		N	N		
	Vehicle Specific 5-cycle	6/9/2014		16060		N	N		
	Vehicle Specific 5-cycle	6/10/2014		15460		N	N		
	Vehicle Specific 5-cycle	6/9/2014		15999		N	N		
D	Vehicle Specific 5-cycle	6/12/2014		15408		N	N		
D	Derived 5-cycle label	6/9/2014		15711		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15493		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15497		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15601		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15598		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15492		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15496		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15600		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15597		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15589		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15590		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		15577		N	N		
car	Vehicle Specific 5-cycle	8/4/2014		15651		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		16064		N	N		

car	Vehicle Specific 5-cycle label	6/19/2014	16067	N	N
car	Vehicle Specific 5-cycle label	6/19/2014	16065	N	N
car	Vehicle Specific 5-cycle label	6/19/2014	16068	N	N
car	Vehicle Specific 5-cycle label	6/19/2014	16066	N	N
car	Vehicle Specific 5-cycle label	6/12/2014	15576	N	N
car	Vehicle Specific 5-cycle label	6/12/2014	15575	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15400	N	N
	Vehicle Specific 5-cycle label	6/19/2014	16059	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15682	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	N	N
car	Derived 5-cycle label	7/14/2014	16273	N	N
car	Derived 5-cycle label	7/14/2014	16275	N	N
car	Derived 5-cycle label	7/28/2014	16283	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	Battery(s)
N	N	Engine cod	N		N		N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	N		Y	CONTINUC	Y	Audi Valve	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	

N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Generatior N	Y	CONTINUCY	AUDI VALV
N	N	Generatior N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Y	Cylinder d Y	Variation c N	
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Co Y	ELECTRO Y	HYDRAUL N	
N	N	Engine Co Y	ELECTRO Y	HYDRAUL N	
N	N	Engine Coc Y	ELECTRON Y	HYDRAULI N	
N	N	ENGINE CC N	Y	INLET AND N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	N	Y	CONTINUC N	
N	N	1.8L Engin N	Y	CONTINUC N	
N	N	2.0L Engin N	Y	CONTINUCY	Audi Valve
N	N	2.0L Engin N	Y	CONTINUCY	Audi Valve
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Co N	N	N	
N	N	Engine Coc N	N	N	
N	N	Engine cod N	Y	Electronic N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	Engine Coc N	N	N	
N	N	N	Y	INTAKE / E N	

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									

alves. The intake valve lift profile is variable and is set for each engine speed and load point. Deactivation of individual cylinders is not

alves. The intake valve lift profile is variable and is set for each engine speed and load point. Deactivation of individual cylinders is not
tolled and hydraulically adjusted.

1	Lithium Ior	266	5.00	37.0	On-Board

EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves. The intake valve lift profile is variable and is set for each engine speed and load point. Deactivation of individual cylinders is not
valves only

alves is variable lift over the full valve lift range (all valves designed), but set to one lift size for each individual engine application (see description)

alves is variable lift over the full valve lift range (all valves designed), but set to one lift size for each individual engine application (see description)

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ECHANICAL-HYDRAULIC

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ECHANICAL-HYDRAULIC

alves is variable lift over the full valve lift range (all valves designed), but set to one lift size for each individual engine application (see description)

ECHANICAL-HYDRAULIC

aust valves on a single camshaft. No change in valve overlaps.

C/4H2OSA1) - Mid-engine configuration is in the Bugatti Veyron and Grand Sport.

ONTROL

ONTROL

ONTROL

ECHANICAL-HYDRAULIC

AMS

AMS

AMS

AMS

AMS

AMS

AMS

controlled and hydraulically adjusted

controlled and hydraulically adjusted

controlled and hydraulically adjusted

AMS

onv.

controlled and hydraulically adjusted

controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
Electrical R	Both	Y						1	AC Inducti
est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
h				GDI	Spark Ignit			N	5W30 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
h				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common F			N	5W30 VW
		40		GDI	Spark Ignit	N	N	N	5W40 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit			N	5W30 VW
h				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit			N	5W40 VW

	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
h	GDI	Spark Ignit	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit N	N	5W40
	GDI	Spark Ignit N	N	5W40
h	GDI	Spark Ignit	N	5W30 VW
	MFI	Multipoint N	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
	MFI	Multipoint N	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
	MFI	Multipoint N	N	5W30 VW
	MFI	Multipoint	N	0W40 / VV
	MFI	Multipoint	N	10W60 VW
	MFI	Multipoint/s	N	5W30 VW
	MFI	Multipoint/s	N	5W30 VW
	MFI	Multipoint	N	5W30 VW
	GDPI	Spark Ignit	N	5W30 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W-40 VW
	GDI	Spark Ignit	N	5W40 / VV
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	MFI	Multipoint	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common F	N	5W40 VW
	CRDI	Common F	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common F	N	5W30 VW
	GDI	Spark Ignit	N	5W40 VW

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AV-S	Auto(AV-S						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M						
N	No	Auto(AV-S	Auto(AV-S	Audi A6 CV					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 qu					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S	Auto(AM-S						
N	No	Manual(M	Manual(M						
M 50500	No	Auto(AM-S	Auto(AM-S						
M 50500	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Manual(M	Manual(M						
M 50500	No	Auto(AM-S	Auto(AM-S						
M 50500	No	Manual(M	Manual(M						
N 50700	No	Auto(AM-S	Auto(AM-S						
N 50700	No	Auto(AM-S	Auto(AM-S						
N 50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						

N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S	Auto(AM-S	TT Coupe c
N	No	Auto(AM-S	Auto(AM-S	TT Coupe c
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S	Auto(AM-S	
Y	Yes	Auto(AM-S	Auto(AM-S	
N	No	Auto(AM-S	Auto(AM-S	VENENO
Y	Yes	Auto(AM-S	Auto(AM-S	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Manual(M	Manual(M	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(S6)	Auto(S6)	Tiguan fro
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[illegible]	EPA Calculated Gas G	[illegible]	[illegible] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9		7	7	FVGAV02.(	9		
36.2		7	7	FVGAV02.(	9		
34.3		6	6	FVGAV02.(	9		
35.2		7	7	FVGAV02.(	9		
35.4		7	7	FVGAV02.(	5		
32.7		6	6	FVGAJ02.0	5		
33.1		6	6	FVGAV02.(	5		
30.1		5	5	FVGAJ02.0	5		
32.7		6	6	FVGAJ02.0	5		
33.1		6	6	FVGAV02.(	5		
36.9		7	7	FVGAV02.(	5		
30.0		5	5	FVGAV02.(	5		
28.1		5	5	FVGAJ03.0	5		
37.7		7	6	FVGAJ03.0	5		
27.9		5	5	FVGAJ03.0	5		
37.7		7	6	FVGAJ03.0	5		
28.8		5	5	FVGAV03.(	5		
28.0		5	5	FVGAV04.(	5		
36.9		7	6	FVGAJ03.0	5		
28.8		5	5	FVGAV03.(	5		
27.6		5	5	FVGAV04.(	5		
21.1		4	4	FVGAV06.3	5		
31.2		6	6	FVGAJ02.0	5		
30.0		5	5	FVGAV02.(	5		
29.5		5	5	FVGAV02.(	5		
29.6		5	5	FVGAJ02.0	5		
27.2		5	5	FVGAJ03.0	5		
34.3		7	5	FVGAJ03.0	5		
34.0		6	6	FVGAT02.(	5		
28.1		5	4	FVGAT03.(	5		
23.1		4	4	FVGAT03.(	5		
20.7		4	4	FVGAV04.2	5		
17.2		2	2	FVGAV04.2	5		
19.6		3	3	FVGAV05.2	5		
17.0		2	2	FVGAV05.2	5		
20.7		4	4	FVGAV04.2	5		
17.2		2	2	FVGAV04.2	5		
19.6		3	3	FVGAV05.2	5		
17.0		2	2	FVGAV05.2	5		
22.8		4	4	FVGAV04.2	5		
22.6		4	4	FVGAV04.2	5		
24.1		4	4	FVGAV04.(	5		
33.2		6	6	FVGAV02.(	5		
26.9		5	5	FVGAJ03.0	5		

23.5	[redacted]	5	5 FVGAJ03.0	5
26.9		5	5 FVGAJ03.0	5
23.5		5	5 FVGAJ03.0	5
26.4		5	5 FVGAJ03.0	5
25.4		5	5 FVGAV04.(	5
25.4		5	5 FVGAV04.(	5
25.0		5	5 FVGAV04.(	5
24.9		4	4 FVGAJ03.0	5
33.3		6	6 FVGAV02.(	5
33.3		6	6 FVGAV02.(	5
23.7		4	4 FVGAV04.(	5
19.5		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
15.9		1	1 FVGAV06.8	5
12.6		1	1 FVGAV08.(	5
16.4		1	1 FVGAV06.	5
15.8		1	1 FVGAV06.	5
14.6		1	1 FVGAV06.5	5
20.0		3	3 FVGAV05.2	5
37.0		7	7 FVGAV02.(	7
35.9		7	7 FVGAV02.(	7
33.9		6	6 FVGAV02.(	7
33.1		6	6 FVGAV02.(	7
35.9		7	7 FVGAV02.(	7
33.3		6	6 FVGAV02.(	7
33.1		6	6 FVGAV02.(	7
32.2		6	6 FVGAJ02.0	5
31.4		6	6 FVGAJ02.0	5
24.8		5	5 FVGAV03.(	5
32.4		6	6 FVGAV02.(	5
39.3		7	7 FVGAV02.(	9
35.9		7	7 FVGAV02.(	9
35.8		7	7 FVGAV02.(	9
35.9		7	7 FVGAV02.(	5
37.3		7	7 FVGAV02.(	7
46.2		8	8 FVGAV02.	5
46.9		8	7 FVGAV02.(	5
28.5		5	5 FVGAV03.(	5
29.7		5	5 FVGAJ02.0	5
29.6		5	5 FVGAJ02.0	5
29.6		5	5 FVGAT03.(	5
25.0		4	4 FVGAT03.(	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	7
FVGAV02.(	7

FVGAV02.(	5

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	410	290	356			
	0		398	277	343			
		1500	446	314	386			
		1000	410	290	356			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1000	421	315	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2000	496	347	429			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		2500	488	321	413			

	3250	519	341	439
	2500	488	321	413
	3250	519	341	439
	2500	500	341	428
	3250	531	330	441
	3250	531	330	441
	3250	534	331	442
	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	11000	831	523	692
	12750	902	547	742
	6750	629	441	544
1500		357	270	318
1250		372	270	326
0		377	302	343
0		393	292	347
1250		369	274	326
	500	392	314	357
0		393	292	347
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2250		350	240	300
750		358	271	319
750		355	258	311
1500		357	259	313
1500		366	251	314
2750		340	242	296
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5	
289.0	188.0	243.6	362.1	255.5	314.1	
305.0	200.0	257.8	378.6	280.1	334.3	
294.0	198.0	250.8	366.0	271.0	323.2	
292.0	199.0	250.2	373.7	280.2	331.6	
323.0	206.0	270.4	410.3	289.6	356.0	
321.2	202.4	267.7	398.0	276.6	343.4	
353.0	224.0	295.0	445.7	313.9	386.4	
323.0	206.0	270.4	410.3	289.6	356.0	
321.2	202.4	267.7	398.0	276.6	343.4	
282.0	189.0	240.2	360.0	272.0	320.4	
358.0	219.0	295.4	452.0	306.0	386.3	
383.5	233.0	315.8	481.7	326.0	411.6	
331.0	194.0	269.4	415.7	267.3	348.9	
385.0	236.0	318.0	492.9	320.9	415.6	
331.0	194.0	269.4	415.7	267.3	348.9	
376.5	225.0	308.3	473.4	302.9	396.7	
391.0	224.0	315.9	483.9	299.0	400.7	
339.0	198.0	275.6	425.6	280.1	360.1	
376.5	225.0	308.3	473.4	302.9	396.7	
396.0	226.0	319.5	492.3	309.7	410.1	
515.0	310.0	422.8	640.3	403.3	533.6	
332.0	225.0	283.9	420.9	315.2	373.3	
357.5	223.0	297.0	451.0	312.5	388.7	
357.0	230.0	299.9	445.6	315.7	387.1	
358.0	230.0	300.4	451.6	321.9	393.2	
390.0	251.0	327.4	496.0	347.0	429.0	
348.0	231.0	295.4	430.5	328.5	384.6	
380.0	223.0	309.4	369.0	298.0	337.0	
446.0	260.0	362.3	541.0	369.0	463.6	
458.0	295.0	384.6	569.6	409.5	497.6	
540.6	299.8	432.3	656.3	394.3	538.4	
651.3	362.7	521.4	771.6	439.1	622.0	
577.0	309.4	456.6	685.6	400.2	557.2	
646.3	377.5	525.3	753.1	454.0	618.5	
540.6	299.8	432.3	656.3	394.3	538.4	
651.3	362.7	521.4	771.6	439.1	622.0	
577.0	309.4	456.6	685.6	400.2	557.2	
646.3	377.5	525.3	753.1	454.0	618.5	
466.0	296.0	389.5	562.0	379.0	479.6	
463.0	307.0	392.8	558.0	398.0	486.0	
467.0	253.0	370.7	573.0	336.1	466.4	
311.0	214.0	267.4	381.4	289.2	339.9	
396.0	248.0	329.4	488.0	321.0	412.8	

443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
708.0	392.0	565.8	831.0	523.0	692.4
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
322.0	206.1	269.8	392.7	291.6	347.2
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
322.0	206.1	269.8	392.7	291.6	347.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
272.0	169.0	225.6	350.1	239.8	300.5
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
302.0	179.0	246.6	356.6	259.3	312.8
285.3	177.3	236.7	365.8	251.0	314.1
260.0	169.0	219.0	340.1	241.6	295.8
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT_
N	3.7	3.7			
N	3.6	3.6			
N	3.8	3.8			
N	3.7	3.7			
N	3.7	3.7			
N	4.0	4.0			
N	3.8	3.8			
N	4.3	4.3			
N	4.0	4.0			
N	3.8	3.8			
N	3.6	3.6			
N	4.3	4.3			
N	4.5	4.5			
N	3.4	3.4			
N	4.8	4.8			
N	3.4	3.4			
N	4.5	4.5			
N	4.5	4.5			
N	3.6	3.6			
N	4.5	4.5			
N	4.5	4.5			
N	5.9	5.9			
N	4.2	4.2			
N	4.3	4.3			
N	4.3	4.3			
N	4.3	4.3			
N	4.8	4.8			
N	3.7	3.7			
N	3.8	3.8			
N	4.5	4.5			
N	5.6	5.6			
N	5.9	5.9			
N	7.1	7.1			
N	6.2	6.2			
N	7.1	7.1			
N	5.9	5.9			
N	7.1	7.1			
N	6.2	6.2			
N	7.1	7.1			
N	5.6	5.6			
N	5.6	5.6			
N	5.3	5.3			
N	3.8	3.8			
N	4.8	4.8			

N	5.0	5.0
N	4.8	4.8
N	5.0	5.0
N	4.8	4.8
N	5.0	5.0
N	5.0	5.0
N	5.0	5.0
N	5.3	5.3
N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	7.7	7.7
N	8.3	8.3
N	6.2	6.2
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	3.8	3.8
N	3.7	3.7
N	4.0	4.0
N	3.8	3.8
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.3	3.3
N	3.6	3.6
N	3.6	3.6
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

EPA_UNRD

EPA_UNRI	EPA_UNRI	EPA_UNRI	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richarc	6
					Mr Richard E Thomas Jr	
					Mr Richarc	5
					Mr Richarc	6
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
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					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richarc	6
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richarc	5
					Mr Richard E Thomas Jr	
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Mr Richard E Thomas Jr

mined)

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 6/23/2014 4:54:30 PM
Subject: RE: 2015 FE Guide as of Fri (6/20) attached

Thanks Dave, I corrected the Passat TDI automatic, GHG rating.

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, June 23, 2014 11:14 AM
To: Thomas, Richard (EEO)
Subject: 2015 FE Guide as of Fri (6/20) attached

Richard,

Here's the data as is after running the macro. I didn't have time to clean up the data----e.g. add the Veneno to the Aventador carline name, etc. The macro picked up an error in the Diesel Passat.

Call me if questions.

Dave

To: Giedrius Ambrozaitis[gambrozaitis@autoalliance.org]
Cc: Olechiw, Michael[olechiw.michael@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]
From: Fernandez, Antonio
Sent: Mon 6/23/2014 5:06:24 PM
Subject: RE: Potential meeting dates for diesel ADP updates

Giedrius,

I have sent out the invite internally for this meeting on July 16th at 12:00 to 1:00. This works around the various meetings VW has with ASD and CD that day.

Tony

From: Giedrius Ambrozaitis [mailto:gambrozaitis@autoalliance.org]
Sent: Monday, June 23, 2014 12:44 PM
To: Fernandez, Antonio
Cc: Olechiw, Michael; Wright, DavidA
Subject: RE: Potential meeting dates for diesel ADP updates

Tony -

The week of July 14th is good for everyone from my side. VW would appreciate a meeting in the afternoon of July 16, since they are meeting with you in the morning.

As far as what we would cover would likely include review of available whole vehicle vs bench aging data and updates on the outreach to stakeholders EMA/MECA/Global.

Thanks,

Giedrius

Alliance of Automobile Manufacturers

(248) 915-8836

From: Giedrius Ambrozaitis
Sent: Wednesday, June 11, 2014 1:57 PM
To: Fernandez, Antonio
Cc: Olechiw, Michael; Wright, DavidA
Subject: RE: Potential meeting dates for diesel ADP updates

Tony -

Thank you very much. I'm still canvassing people and will get back to you soon with info.

Giedrius

Alliance of Automobile Manufacturers

(248) 915-8836

From: Fernandez, Antonio [fernandez.antonio@epa.gov]
Sent: Monday, June 09, 2014 11:35 AM
To: Giedrius Ambrozaitis
Cc: Olechiw, Michael; Wright, DavidA
Subject: Potential meeting dates for diesel ADP updates

Giedrius,

I will set up a meeting on my end for either the last week of June or the middle weeks of July. Let me know what works best for you and your members that would attend. Also, let us know what you would plan to cover.

Thanks

Tony

To: Wehrly, Linc[wehrly.linc@epa.gov]; Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Mon 6/23/2014 7:19:09 PM
Subject: RE: Testing Strategy Approval Request - Audi A8 Start/Stop Systems

Hello Linc,

yes you understood my question, but somehow we do not understand the logic in your answer.

Just left you a voicemail, can we set up a conference call/meeting tomorrow ?

Thank you

Ex. 7

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Montag, 23. Juni 2014 14:59
To: Ex. 7 (EEO); Good, David
Cc: Ex. 7 (EEO); Ex. 7 (EEO)
Subject: RE: Testing Strategy Approval Request - Audi A8 Start/Stop Systems

Oliver,

I'm not sure that I fully understand your question, but I think you are asking whether VW can get 50% of the off-cycle credits for a start-stop system that "latches" or stays in the "last mode" of operation upon key-off. If that is the case, the answer is no. For fuel economy testing purposes, we allow a manufacturer to test in the predominant mode if they can establish a predominant mode. If there is no predominant mode (a latching system is not considered predominant), the manufacturer may harmonically (50/50) average the results of start-top engaged and start-stop disengaged. However, for GHG off-cycle credits, only start-stop systems that have been deemed to have a predominant mode are eligible for off-cycle credits.

Please let me know if I have misunderstood the nature of your question.

Thanks,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: [Ex. 7 @vw.com]
Sent: Friday, June 20, 2014 7:49 AM
To: Good, David; Wehrly, Linc
Cc: [Ex. 7 (EEO); [Ex. 7 (EEO)
Subject: FW: Testing Strategy Approval Request - Audi A8 Start/Stop Systems

Hello David,

hello Linc,

thank you again for the good discussion Wednesday.

I have one more question for you:

In the mail below you granted us a factor of 50% of the Fuel Economy savings for a car that is equipped with a Stop-Start System in a “Last Mode” configuration.

In order to prepare the 2012/2013 Off Cycle application and for future planning of the roll out for Stop-Start would it be acceptable for you if we calculate with 50% of the according Off-Cycle credit value for each vehicle equipped with a “Last Mode” System ?

Thank you

Ex. 7

Ex. 7

Engineering and Environmental Office

VOLKSWAGEN **Group of America, Inc.**

Ex. 7
Phone: Ex. 7
Cell: Ex. 7
FAX: Ex. 7
E-Mail: Ex. 7

From: David Good [mailto:Good.David@epamail.epa.gov]
Sent: Thursday, May 31, 2012 2:58 PM
To: Thomas, Richard (EEO)
Cc: Jim Snyder; Kata, Leonard (EEO); Linc Wehrly; Stephen Healy; William Ott; DavidA Wright; Joel Dalton; Joel Ball
Subject: Re: Testing Strategy Approval Request - Audi A8 Start/Stop Systems

Richard,

Background: In a May 8, 2012 meeting, VW/Audi staff presented EPA with a description of the stop/start

system and cylinder deactivation system for these 2013 Audi A8 vehicles. The vehicle is equipped with what you called "Last-mode functionality," where the last stop/start setting (enable/disable mode) is restored after stopping and restarting the vehicle. In other words, the stop/start button is "latched" when stopping and restarting the vehicle. Although I had a conflict on May 8, 2012 and didn't get to drive the vehicle, it's my understanding that the May 8, 2012 drive was acceptable to all EPA engineers who drove it (including both the stop/start feature and the cylinder deactivation feature of the vehicle).

Regarding your current request to perform one test for the Highway, SC03 and Cold FTP cycle (and two sets of FTP and US06 tests----with and without the stop/start system enabled), we believe that your request sounds reasonable to us, and it is hereby approved.

Please call or email me if you have questions about this email.

Regards

"Thomas, Richard (EEO)" ---05/21/2012 09:02:46 AM---Hello Dave; After our visit with the demonstration 4.0L V8 Audi A8 on May 8th and equipped with cyli

From: "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>
To: David Good/AA/USEPA/US@EPA, Jim Snyder/AA/USEPA/US@EPA
Cc: Linc Wehrly/AA/USEPA/US@EPA, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>
Date: 05/21/2012 09:02 AM
Subject: Testing Strategy Approval Request - Audi Start/Stop Systems

---

Hello Dave;

After our visit with the demonstration 4.0L V8 Audi A8 on May 8th and equipped with cylinder deactivation and start/stop strategy, we reviewed our testing strategy and have the following request.

The 3.0L V6 engine equipped Audi A8 emission data vehicle tested on May 2nd and May 8th at the EPA facility, was tested in two configurations. That is: complete five cycle tests with start/stop active and a complete second set of tests with start/stop system inactive at our facility in Ingolstadt . EPA confirmed the city tests in both configurations, start/stop active and inactive. Under the start/stop enable conditions you saw during the presentation, it is clear that the engine does not stop during three of the 5-cycle tests. There is no engine shut down in Highway, SC03 and Cold CO test cycles and only marginal engine stop in the US06 test cycle. The current start/stop strategy would yield on minor fuel economy improvement in the FTP and US06 cycle and therefore we would prefer to test only the FTP and US06 harmonically average the two sets of test configurations together at the 50/50 rate.

The high cost testing burden at our facility would be lessened and testing capacity could improve. Until which time there are some operational start/stop system strategy changes, we would propose to test only the FTP and US06 with start/stop active and inactive and average these tests at the 50/50 rate.

If you have any questions, please contact me directly.

Best regards,
Richard

Richard E. Thomas
VOLKSWAGEN Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326
Engineering and Environmental Office (EEO)
Phone: 248 754-4213
Fax: 248 754-4207
Richard.Thomas@VW.com<mailto:Richard.Thomas@VW.com>

(See attached file: winmail.dat)

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7

Ex. 7

From: Ex. 7
Sent: Mon 6/23/2014 7:42:11 PM
Subject: VW Group - Scheduling Request Update

Hello Jim,

As you may recall, earlier this spring we made a special request for scheduling consideration for confirmatory testing of the new e-Golf (BEV) . This request was for the time frame of July 7th.

Today we were informed that there have been internal delays with this vehicle. Therefore, we are now withdrawing our request. We will follow up when data finally becomes available for this vehicle.

As always, thank you for your consideration with scheduling and our apologies for any inconvenience this may have caused.

Regards

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

Fax:

mailto:

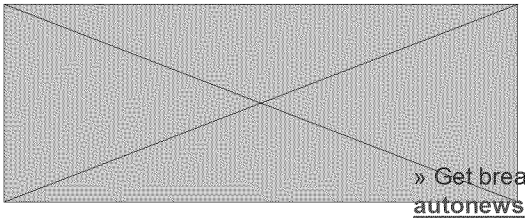
Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 6/23/2014 8:35:09 PM
Subject: DAILY: GM creates 'operational excellence' post | Honda, Nissan, Mazda expand recalls over Takata airbag flaw | Why Asian automakers show no love for aluminum | Behind Ford's store blitz in China

Today's most read story

Honda, Nissan, Mazda expand recalls over Takata airbag flaw

June 23, 2014



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Click here to open this newsletter in a Web browser

EDITOR'S NOTE: We are seeking your feedback about our newsletters. Click here to take a short survey

TOP NEWS

GM creates 'excellence' post, names new N.A. manufacturing head

3:23 pm U.S. ET | Jun 23

GM is moving North American manufacturing chief Gerald Johnson to a newly created "operational excellence" post reporting directly to CEO Mary Barra. He will be replaced by former labor negotiator Cathy Clegg. Johnson, 51, will "focus on process discipline, improvement and waste elimination," GM said today. ...

» READ

Honda, Nissan, Mazda expand recalls over Takata airbag flaw

UPDATED: 6/23/14 3:00 pm ET -- adds NHTSA comment
3:51 am U.S. ET | Jun 23

The recall storm embroiling Takata airbags widened

today with Honda, Nissan and Mazda calling back nearly 3 million vehicles to fix possibly defective inflator propellant made in North America. ... » READ

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"The auto accessories industry is $40 billion and dealers represent less than 5%."

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GM recall saga triggering a new reality for automakers, suppliers

1:00 pm U.S. ET | Jun 23

Automotive manufacturers must -- because they can't afford not to -- protect themselves from liability in every aspect of production. ... » READ

Asian automakers still reluctant to embrace aluminum

12:01 am U.S. ET | Jun 22

As western carmakers such as Audi and Ford embrace aluminum to save weight and boost fuel economy, their Asian rivals remain reluctant to invest in the costly retooling required that would disrupt existing manufacturing processes and supplier relationships. ... » READ

Mini, beloved by Chinese women, seeks a few good men

12:01 am U.S. ET | Jun 21

How much do women in China love BMW's Mini? Perhaps a bit too much for Mini's comfort. So the company is taking pains to give its cars more masculine connotations. ... » READ

ON THE BLOGS

HANS GREIMEL

In 1 day, Ford blitzes China with 88 stores

» READ

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Hyundai-Kia tops J.D. Power's Initial Quality Study for 1st time

Google to reveal operating system that will rival Apple CarPlay

Cadillac's third U.S. sales chief in 2 years leaves GM

Volvo to export China-made cars to U.S., Russia next year, report says

What's behind Hyundai-Kia quality win?

GM revises tow ratings on pickups

12:01 am U.S. ET | Jun 23

Fleet buyers want to expand, add alternative-fuel vehicles, survey finds

2:58 pm U.S. ET | Jun 23

No apologies from Cadillac CMO

7:00 am U.S. ET | Jun 23

Mercedes unveils CLS updated inside and out

12:01 am U.S. ET | Jun 23

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

» Nov. 21 - Automobilwoche Kongress

UPCOMING WEBINARS

» June 24 - Automotive Innovation

by IBM

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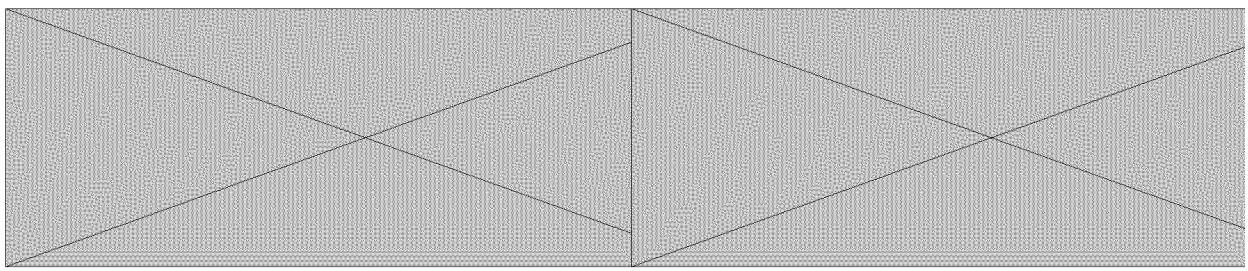
Eaton to pay Meritor $500 million, avoid trial and possible $2.4 billion claim

2:48 pm U.S. ET | Jun 23

TI Automotive plans debt-fueled dividend for hedge fund owners, report says

8:20 am U.S. ET | Jun 21

WEBINARS
» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Mon 6/23/2014 8:52:18 PM
Subject: RE: VW Group - Scheduling Request Update

Okay, I let the lab know but they hadn't officially scheduled it anyway.

-Jim

From: Ex. 7 @vw.com]
Sent: Monday, June 23, 2014 3:42 PM
To: Snyder, Jim
Cc: Ex. 7
Ex. 7
Subject: VW Group - Scheduling Request Update

Hello Jim,

As you may recall, earlier this spring we made a special request for scheduling consideration for confirmatory testing of the new e-Golf (BEV) . This request was for the time frame of July 7th.

Today we were informed that there have been internal delays with this vehicle. Therefore, we are now withdrawing our request. We will follow up when data finally becomes available for this vehicle.

As always, thank you for your consideration with scheduling and our apologies for any inconvenience this may have caused.

Regards

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax:

mailto:

To: Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Ex. 7 Ex. 7 Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Joerg Launer (Jorg.Launer@vw.com)[Jorg.Launer@vw.com]; John Juriga (jjuriga@hatci.com)[jjuriga@hatci.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]; Thorsten Wesse (Thorsten.Wesse@afcc-auto.com)[Thorsten.Wesse@afcc-auto.com]; Amy Lilly (alilly@hatci.com)[alilly@hatci.com]; Ex. 7 Ex. 7 Arwed Niestroj (arwed.niestroj@daimler.com)[arwed.niestroj@daimler.com]; Bill Elrick[belrick@CAFCP.org]; Bob Cassidy (robert.cassidy@nissan-usa.com)[robert.cassidy@nissan-usa.com]; Brandi Gonzales[bgonzales@CAFCP.org]; Grundler, Christopher[grundler.christopher@epa.gov]; Chris White[cwhite@CAFCP.org]; Dean Kato (dean@intereco.com)[dean@intereco.com]; Ex. 7 Ex. 7 Frank Seyfried (frank.seyfried@volkswagen.de)[frank.seyfried@volkswagen.de]; Ex. 7 Ex. 7 Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Juergen Friedrich (juergen.friedrich@daimler.com)[juergen.friedrich@daimler.com]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kiho Yoo (k.u@hyundai-motor.com)[k.u@hyundai-motor.com]; Linda Carrizosa[lcarrizosa@cafcp.org]; Lisa Mirisola (lmirisola@aqmd.gov)[lmirisola@aqmd.gov]; Mark S. Torigian Esq (Mtorigian@hatci.com)[Mtorigian@hatci.com]; Matt McClory (matt.mcclory@tema.toyota.com)[matt.mcclory@tema.toyota.com]; Matthew Forrest (matthew.forrest@daimler.com)[matthew.forrest@daimler.com]; Randy Roesser (Randy.Roesser@energy.ca.gov)[Randy.Roesser@energy.ca.gov]; Wysor, Tad[wysor.tad@epa.gov]; Takehito Yokoo (takehito.yokoo@tema.toyota.com)[takehito.yokoo@tema.toyota.com]; Tiger Jeong (tigerjeong@hyundai.com)[tigerjeong@hyundai.com]; Tim Olson (tolson@energy.state.ca.us)[tolson@energy.state.ca.us]; William Craven (william.b.craven@daimler.com)[william.b.craven@daimler.com]
Cc: catherine.kim@daimler.com[catherine.kim@daimler.com]; Kaori Alarid (kaori.alarid@tema.toyota.com)[kaori.alarid@tema.toyota.com]; Ex. 7 Ex. 7 Melanie Hobenshield (melanie.hobenshield@afcc-auto.com)[melanie.hobenshield@afcc-auto.com]; Pat Fritschi (pf38@chrysler.com)[pf38@chrysler.com]; Pat Krayser[pkrayser@aqmd.gov]
From: Linda Carrizosa
Sent: Tue 6/24/2014 12:19:42 AM
Subject: By Wed, June 25: Doodle Poll for possible re-schedule of July 8th in-person ST planning meeting

Dear Steering Team members,

Due to some conflicts for July 8th, we are considering additional dates for the in-person Steering Team planning meeting. We are not yet cancelling the 8th, pending your response to these additional dates. We will make the decision by end of day on **Wednesday, June 25,** so you can plan your travel.

Please respond to the Doodle poll here: http://doodle.com/winga644eurz7s6q, no later than **3pm PDT** on **Wednesday, June 25.**

Thank you,

Linda Carrizosa | Administrative Assistant | CaFCP

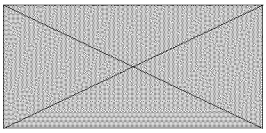
D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

From: Ex. 7
Importance: Normal
Subject: Teco EEO-EPA
Start Date/Time: Tue 6/24/2014 6:00:00 PM
End Date/Time: Tue 6/24/2014 6:30:00 PM

;
VWGoA calls 734-214-4286

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Environmental Law360
Sent: Wed 6/25/2014 7:51:40 AM
Subject: Sidley's Keisler Builds Resume As High Court Climate Pro



ENVIRONMENTAL

Wednesday, Jun. 25, 2014

TOP NEWS

Top Spanish Court OKs Canary Islands Oil Exploration

Spain's highest court on Tuesday rejected seven legal challenges to a Repsol YPF SA-led oil-drilling project off the shores of the Canary Islands that has been in the works for more than a decade.

House Passes Bill That Could Hasten Keystone Approval

The U.S. House of Representatives passed a bill Tuesday that would change the way gas and electric construction projects that cross U.S. borders, including Keystone XL, are approved, while the White House threatened a veto, saying the bill would have "serious security, safety, foreign policy, environmental, economic and other ramifications."

Texas High Court Asked If EPA Letters Trigger CGL Coverage

The Texas Supreme Court on Monday accepted a case asking whether a "potential responsible party" letter issued by the U.S. Environmental Protection Agency triggered Travelers Indemnity Co.'s duty to defend under a commercial general liability policy issued to a Waste Management Inc. predecessor.

ANALYSIS

Sidley's Keisler Builds Resume As High Court Climate Pro

The U.S. Supreme Court's Monday invalidation of the U.S. Environmental Protection Agency's greenhouse gas rules for stationary sources capped off what's been a busy few months for Sidley Austin LLP partner Peter Keisler, who has become a go-to litigator for industry in high court battles over U.S. energy and climate policy.

DC Circ. Battle Could Shift Enforcement From EPA To Enviros

The Sierra Club is asking the D.C. Circuit to nix civil penalty limits in older U.S. Environmental Protection Agency rules — a critical challenge experts say could dramatically shift environmental enforcement leverage from the EPA to citizens groups by

Organizations In The News

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eliminating a built-in shield against lawsuits.

5 Tips For Defeating A Class Cert. Bid

A series of recent U.S. Supreme Court and Ninth Circuit decisions are helping to bolster defendants' position against plaintiffs' attempts to certify class actions, but defendants still have their work cut out for them when fighting these high-stakes motions. Here, experts share five tips for beating a class certification bid.

California Coastal Projects Hit Fresh Wave Of Delays

California coastline development projects, which already face major hurdles in complying with the state's environmental act, are running up against longer delays thanks to a coastal authority that has become more aggressive in its appeals of local project plans, lawyers say.

POLICY & REGULATION

$14B Ga. Nuke Plant Behind Schedule, Warns Commission

A Southern Co. subsidiary's $14 billion construction project involving the first nuclear power plant reactors to be built in the U.S. in decades is behind schedule and over budget, according to a report released Monday by the Georgia Public Service Commission.

LITIGATION

Feds Can't Get $3.5M Fees From Wash. DOT In Superfund Case

A federal judge in Washington state on Monday denied the U.S. government's attempt to seek $3.5 million in attorneys' fees and costs from the Washington State Department of Transportation in a suit over tar pollution on the Tacoma waterfront, ruling it is too late in the litigation to ask for additional response costs.

Enviros Challenge Calif. Air Board's Review Of $68B Rail Plan

A California environmental group on Monday filed the latest legal challenge to a $68 billion high-speed rail project, accusing the California Air Resources Board in Fresno County Superior Court of downplaying the potential environmental impact of the project and misstating its ability to reduce greenhouse emissions.

Brooklyn Groups Can't Stop Publicly Funded High Rise

A New York judge has allowed construction to proceed on a contested 23-story apartment complex on Brooklyn's Flatbush Avenue, denying an injunction sought by opponents who say the project was awarded $72 million in public funds without proper environmental review.

Caterpillar Hit With Defective Emission Control Class Action

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Jones Day

Keker & Van Nest

Kirkland & Ellis

Manatt Phelps

Caterpillar Inc. was hit with a putative class action in Colorado federal court on Tuesday, alleging its heavy-duty on-highway diesel engines, designed to adhere to 2007 U.S. Environmental Protection Agency emissions regulations, contain a design defect that requires extensive repairs and replacements.

DEALS

UK's Green Investment Bank Eyes £1B Offshore Fund

The U.K.'s Green Investment Bank is planning a £1 billion ($1.7 billion) fund to acquire offshore projects around the country and is looking for long-term co-investors to raise capital, it said Tuesday.

KKR Pays €417M For Stake In Acciona Int'l Green Energy Biz

KKR & Co. will pay €417 million ($567 million) for a slice of Spanish energy and infrastructure firm Acciona Energia SA's international renewable energy business and will also help fund the growth of its project portfolio, the companies announced Tuesday.

EXPERT ANALYSIS

New 'Streamlined' DOI Strategy Takes Regional Approach

The U.S. Department of the Interior's overarching goal in its new strategy on mitigation policies seeks to encourage development while trying to protect natural and cultural resources. The department intends to do this by identifying high-value regional priorities so developers can plan projects more effectively from the outset, say attorneys at Venable LLP.

LEGAL INDUSTRY

Robbins Russell's Happy Warrior: Roy Englert

Robbins Russell's Roy Englert talks to Law360 about elevator pitches, tabloid trials and what it means to be a happy lawyer.

4th Circ. Nominee Defends Record As Senate OKs 4 Judges

Senators on Tuesday grilled a Fourth Circuit nominee over her outspoken political views alongside nominees for the Court of Federal Claims and New York and Wisconsin federal judiciary, questioning whether she could remain impartial, as they easily confirmed four nominees to sit on the Florida and Vermont federal benches.

Texas Powerhouse: Gibson Dunn

Gibson Dunn's 50-lawyer Texas team may be smaller in ranks than other national law firms with a strong foothold in the state, but its ability to play above its weight class has earned it

Organizations In The News

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Goldberg Segalla

Jeffer Mangels

Jones Day

Keker & Van Nest

Kirkland & Ellis

Manatt Phelps

a reputation as having one of the most sophisticated litigation practices in the region.

Pennsylvania Powerhouse: Fox Rothschild

From its roots in Philadelphia more than a century ago, Fox Rothschild LLP has grown to five offices across Pennsylvania, and thrives through a focus — unusual for a firm of its magnitude — on cultivating an exceptionally broad client base.

New Jersey Powerhouse: Goldberg Segalla LLP

When Goldberg Segalla LLP's Princeton office opened its doors in 2006 under the leadership of partner David S. Osterman — staffed only by him and his paralegal — firmwide managing partner Richard J. Cohen said he knew Osterman was a perfect person around whom to build a New Jersey presence.

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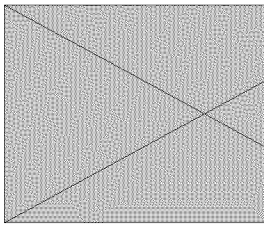
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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 6/25/2014 8:00:27 AM
Subject: Mercedes Launches C-Class, Vows to Increase U.S. Production

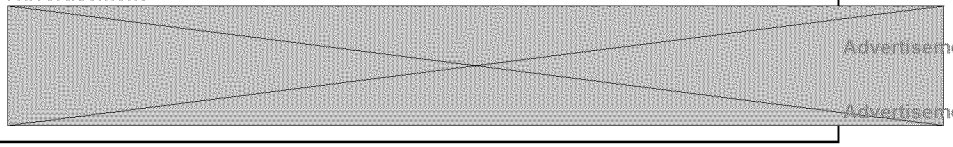
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June 25, 2014



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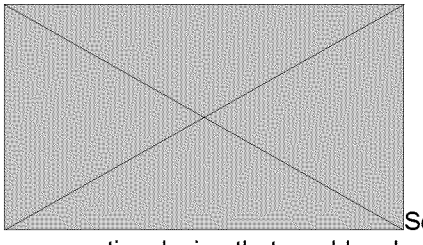


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Bringing Murano Design to Fruition a Battle



Some within Nissan favored a more conservative design that would make manufacturing easier.

FULL ARTICLE

Gallery: '15 Nissan Murano

Nissan recently brought the new Murano CUV to the *WardsAuto* offices for an editorial walk-around with Christopher Reed, director-overseas chief vehicle engineer.

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Optimize performance and product quality, while limiting asset downtime – with analytics.
What if you could confidently predict what is likely to happen next on your production line? What if you could optimize your manufacturing processes and improve product quality, all while lowering costs? Join us on 6/25 and hear how Daimler and IBM are using predictive maintenance to do just this.

Digital Magazine

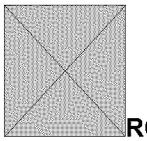
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WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

Chevy Camaro Chief Engineer Nailing Down Name Game

 **ROAD AHEAD BLOG**
Al Oppenheiser has made it his life's work to set in stone exactly what separates, for example, a Camaro Z/28 from a Camaro SS. It's some serious business, too.

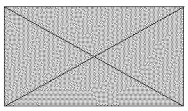
FULL ARTICLE

Updated Mercedes CLS at Home on Tech, Design Edge

The updated models blend contemporary luxury with a strong sport character, aiming at rivals Audi for detailing and BMW for sportiness.

FULL ARTICLE

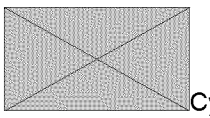
Autoline Daily

 EU Car Sales Rebound; VW XL1 Tech Trickles Down; LED Lamps Growing Complexity

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Design Tips-12 Essentials for Moldability
Ten years ago, we began publishing Protomold Design Tips to help product developers create better injection-molded plastic parts. We've covered materials, texture, draft, sink and many other design considerations. More than 100 tips later, we remain steadfast in our effort to continue informing designers and engineers in all areas of injection-molded part design. As a resource, we've gathered some of our most useful manufacturing advice from the past decade in a collection of essential tips.

Test Drive: Cat-Like Reflexes Make M3/M4 Irresistible

 Cycling up through gears on Road America's long straight-aways to 140 mph, the dual-clutch transmission shifts with the clean-cut precision of a guillotine. It's about this time the driver recognizes the M3/M4 as the king of the sports-car jungle.

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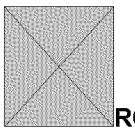
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FULL ARTICLE

Gallery: ’15 BMW M3 and M4

Four generations of M3 have earned BMW the kind of respect every automaker envies. The dual-purpose car is designed to be just at home on the racetrack as tootling through suburbia.

Come On GM, Pony Up

 **ROAD AHEAD BLOG**
General Motors doesn’t mind listing the exotic super cars that are more powerful than the ’15 Chevrolet Corvette Z06, but it couldn’t bear to include the Ford Shelby GT500, which beats the Z06 by 12 hp.

FULL ARTICLE

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Supply Chain Management: What You Don't See Can Hurt You

The Japanese earthquake and subsequent tsunami of May 2011 underscored the fragility of the worldwide automotive supply chain. The disasters temporarily closed plants that produced 17 of the top 20 models of Japanese vehicles sold in the U.S. and prompted General Motors to close a plant in Louisiana and a Peugeot plant in Europe, according to a Congressional Research Service study. Learn More

Mercedes Launches C-Class, Vows to Increase U.S. Production

Mercedes has taken the unprecedented step of offering its most advanced semi-autonomous-driving technology on the C-Class, featured in the automaker’s flagship S-Class model.

FULL ARTICLE

Gallery: Mercedes’ U.S. Assembly Plant

Mercedes-Benz launched its first and only U.S. vehicle assembly plant in 1995. Officially known as Mercedes-Benz U.S. International, MBUSI has solely produced SUVs and CUVs for North America and export markets until production of the C-Class luxury sedan began in June.

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Improve passenger compartment and seat design with the improved SAE International H-Point Machine The HMP-II defines and locates the

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standard seating reference point and offers additional leg, shoe, and pedal reference points; lumbar support measurement; easier installation over the SAE HPM-I. Ideal for advanced design/research applications. See video here.

WardsAuto Poll

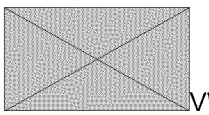
Which will be this summer's hottest new-model introduction? Alfa 4C? Camaro Z/28? Vote for your favorite in our latest poll.

Hella Expects More Automakers to Offer Its High-Beam System

Light is the tunnel for German supplier's LED Matrix Beam headlamps.

FULL ARTICLE

Test Drive: Great Handling Gives VW Golf Competitive Edge

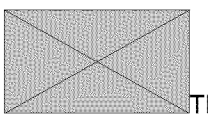
 VW has stepped up its game with the Golf, but the competition in the segment has improved, as well.

FULL ARTICLE

Gallery: '15 Volkswagen Golf

'15 VW Golf boasts many improvements over predecessor, including a refreshed exterior and interior and more-efficient engine.

Test Drive: '15 Volkswagen GTI Carries on Proud Heritage

 The VW GTI has never been about straight-line performance, but rather the combination of above-average power for its segment and superb handling.

FULL ARTICLE

Industry Voices: The Future of Supplier Innovation

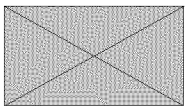
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History shows suppliers that invest in technology to drive innovation have better financial margins, as their solutions are not so easily commoditized. Yet, for innovation to work, suppliers have to take risks to execute new ideas.

FULL ARTICLE

VideoWire

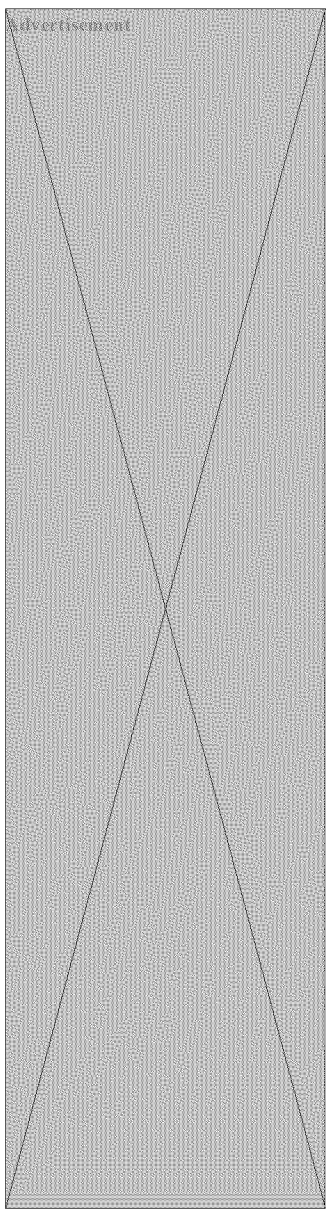
 Details Emerge on GM Victims Plan; BMW Overtakes Benz; Report: U.S. to Build VW SUV

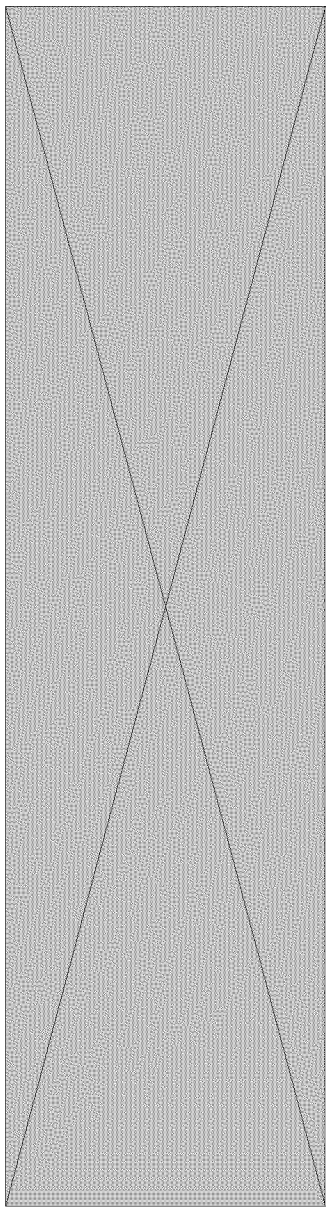
Chrysler to Broaden Use of Stop-Start Systems

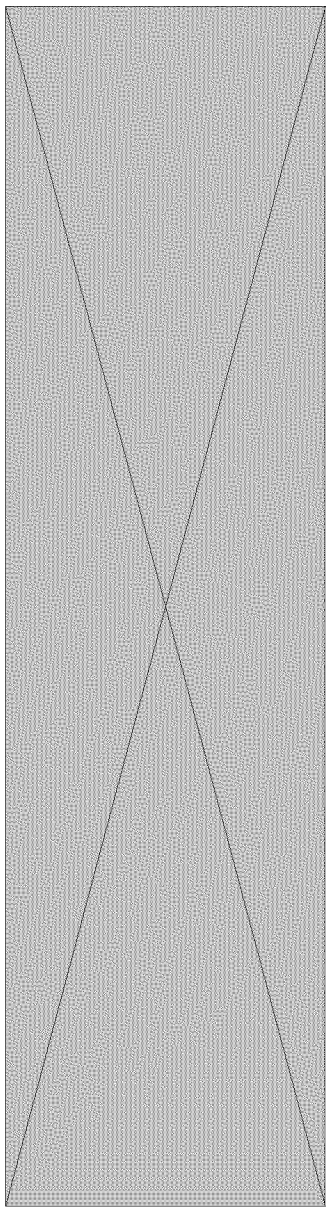
Chrysler says the two applications of the technology in the 200 and Cherokee will reduce carbon-dioxide emissions by up to 3%.

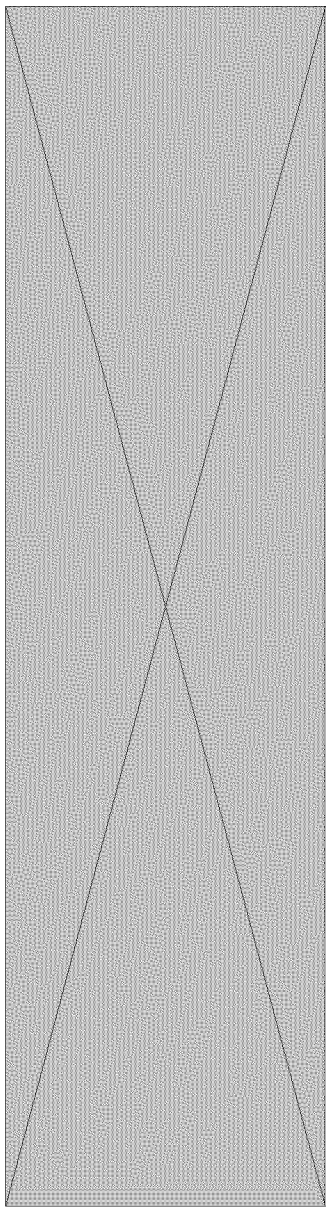
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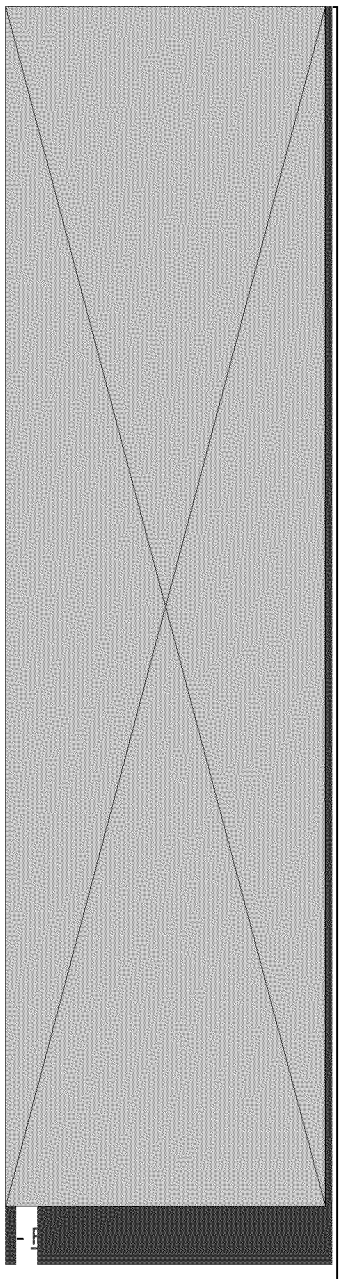
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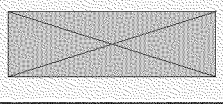
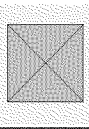
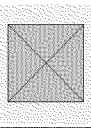
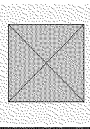
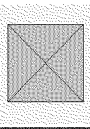
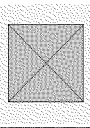
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more



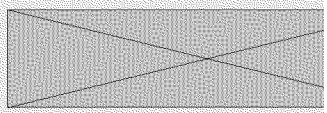
complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

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To: Wehrly, Linc[wehrly.linc@epa.gov]
Cc: Mitcham, Arvon[mitcham.arvon@epa.gov]; Lieske, Christopher[lieske.christopher@epa.gov]; Olechiw, Michael[olechiw.michael@epa.gov]
From: Moran, Robin
Sent: Wed 6/25/2014 1:11:36 PM
Subject: FW: Call from Ex. 7 of VW

Hi Linc, I'm following up per Kathryn's note below, apparently Ex. 7 had some concerns about a start-stop credit meeting? Let us know what support you need from ASD. Thanks.

From: Sargeant, Kathryn
Sent: Wednesday, June 25, 2014 8:57 AM
To: Moran, Robin
Subject: Call from Ex. 7 of VW
Importance: High

Ex. 7 called me as I was leaving today; he had wanted to reach Bill and got bumped to me because I'm acting.

Apparently they had a meeting with Linc yesterday about credit for stop/start; they though they had agreement with EPA going into the meeting, and now realize they don't have agreement.

They're concerned about it and wanted us to be aware (apparently Linc had said he was going to talk to ASD as a next step)?

Do you know anything about this or have any thoughts on who from ASD should be talking to Linc?

From: Ex. 7
Sent: Tuesday, June 24, 2014 5:29 PM
To: Sargeant, Kathryn
Subject: Fwd: Recap of Call

Hello Kathryn,

Thanks for the talk today. Here is an email VW sent to Linc after the stop/start discussion today.

Best Regards,

Ex. 7

Sent from my iPhone

Begin forwarded message:

From: Ex. 7
Date: June 24, 2014 at 3:13:32 PM EDT
To: "wehrly.linc@epa.gov" <wehrly.linc@epa.gov>
Cc: Ex. 7
Ex. 7
Subject: Recap of Call

Hello Linc,

Thanks again for the discussion today, we appreciate you taking the time to talk through the issue with us and to raise the topic with your group meeting later this week. Here are a few points to recap the call:

- VW latching "last-mode" button was aiming at half list value of 1.25 g/mi credit, enough incentive to launch the technology

- Concern about negative JD Power feedback being observed in the market for vehicles with s/s systems (+3 pph versus conventional, could drop brand several rankings)

- Latching button is a short-term bridge to more advanced s/s systems

- VW is not currently seeking credit levels in excess of list values, only a % portion of

list value

- Some alternatives to consider could be

o Use alternative application method to apply 50% to list value by way of understanding within Guidance Document or;

o Use alternative application method to apply VW monitored in-use data (dealer monitored trans control module data at service) and apply this % to the list value (example: if 40% are using s/s, then credit = 0.4*2.5g/mi for PC)

o Not seek a credit beyond the accepted list value

- We would see either of these being a short-term bridge to help drive s/s into vehicles while developing more advanced systems

- An additional possibility would be to reflash cars with "last-mode" buttons in the future after customer acceptance is improved

Thanks,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326
Phone
Cell:
FAX:
E-Mail

Ex. 7

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Thur 6/26/2014 1:53:18 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of June 23, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-6-23-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of June 23, 2014

Attached are the data in Verify as of June 23, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on July 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen	Group of	A3	VGA 7	1.8	4
		2015 Volkswagen	Group of	A3 Cabriolet	VGA 6	1.8	4
		2015 Volkswagen	Group of	A3 Cabriolet quattro	VGA 5	2.0	4
		2015 Volkswagen	Group of	A3 quattro	VGA 4	2.0	4
		2015 Volkswagen	Group of	A4	VGA 46	2.0	4
		2015 Volkswagen	Group of	A4 quattro	VGA 64	2.0	4
		2015 Volkswagen	Group of	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen	Group of	A5 Cabriolet quattro	VGA 66	2.0	4
		2015 Volkswagen	Group of	A5 quattro	VGA 65	2.0	4
		2015 Volkswagen	Group of	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen	Group of	A6	VGA 47	2.0	4
		2015 Volkswagen	Group of	A6 quattro	VGA 48	2.0	4
		2015 Volkswagen	Group of	A6 quattro	VGA 72	3.0	6
Diesel;		2015 Volkswagen	Group of	A6 quattro	VGA 17	3.0	6
		2015 Volkswagen	Group of	A7 quattro	VGA 71	3.0	6
Diesel;		2015 Volkswagen	Group of	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen	Group of	A8	VGA 40	3.0	6
		2015 Volkswagen	Group of	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen	Group of	A8L	VGA 15	3.0	6
		2015 Volkswagen	Group of	A8L	VGA 41	3.0	6
		2015 Volkswagen	Group of	A8L	VGA 10	4.0	8
		2015 Volkswagen	Group of	A8L	VGA 14	6.3	12
		2015 Volkswagen	Group of	allroad quattro	VGA 68	2.0	4
		2015 Volkswagen	Group of	Q3	VGA 62	2.0	4
		2015 Volkswagen	Group of	Q3 quattro	VGA 37	2.0	4
		2015 Volkswagen	Group of	Q5	VGA 67	2.0	4
		2015 Volkswagen	Group of	Q5	VGA 70	3.0	6
Diesel;		2015 Volkswagen	Group of	Q5	VGA 16	3.0	6
Hybrid;		2015 Volkswagen	Group of	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen	Group of	Q7	VGA 12	3.0	6
		2015 Volkswagen	Group of	Q7	VGA 51	3.0	6
		2015 Volkswagen	Group of	R8	VGA 27	4.2	8
		2015 Volkswagen	Group of	R8	VGA 29	4.2	8
		2015 Volkswagen	Group of	R8	VGA 35	5.2	10
		2015 Volkswagen	Group of	R8	VGA 33	5.2	10
		2015 Volkswagen	Group of	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen	Group of	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen	Group of	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen	Group of	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen	Group of	RS5	VGA 30	4.2	8
		2015 Volkswagen	Group of	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen	Group of	RS7	VGA 21	4.0	8
		2015 Volkswagen	Group of	S3	VGA 42	2.0	4
		2015 Volkswagen	Group of	S4	VGA 73	3.0	6
		2015 Volkswagen	Group of	S4	VGA 76	3.0	6
		2015 Volkswagen	Group of	S5	VGA 74	3.0	6
		2015 Volkswagen	Group of	S5	VGA 77	3.0	6
		2015 Volkswagen	Group of	S5 Cabriolet	VGA 75	3.0	6
		2015 Volkswagen	Group of	S6	VGA 20	4.0	8
		2015 Volkswagen	Group of	S7	VGA 19	4.0	8
		2015 Volkswagen	Group of	S8	VGA 9	4.0	8
		2015 Volkswagen	Group of	SQ5	VGA 69	3.0	6

	2015	Volkswagen Group of	Audi	TT Coupe quattro	VGA	2	2.0	4
	2015	Volkswagen Group of	Audi	TT Roadster quattro	VGA	3	2.0	4
	2015	Volkswagen Group of	Bentley	Continental GT	VGA	24	4.0	8
	2015	Volkswagen Group of	Bentley	Continental GT	VGA	43	6.0	12
	2015	Volkswagen Group of	Bentley	Continental GT Convertible	VGA	22	4.0	8
	2015	Volkswagen Group of	Bentley	Continental GT Convertible	VGA	45	6.0	12
	2015	Volkswagen Group of	Bentley	Flying Spur	VGA	23	4.0	8
	2015	Volkswagen Group of	Bentley	Flying Spur	VGA	44	6.0	12
	2015	Volkswagen Group of	Bentley	Mulsanne	VGA	61	6.8	8
	2015	Volkswagen Group of	Bugatti	Veyron	VGA	60	8.0	16
	2015	Volkswagen	Lamborghini	Aventador	VGA	52	6.5	12
	2015	Volkswagen Group of	Lamborghini	Aventador Roadster	VGA	53	6.5	12
	2015	Volkswagen	Lamborghini	Aventador	VGA	54	6.5	12
	2015	Volkswagen Group of	Lamborghini	Huracan	VGA	25	5.2	10
	2015	Volkswagen	Volkswagen	Beetle	VGA	79	1.8	4
	2015	Volkswagen	Volkswagen	Beetle	VGA	78	1.8	4
	2015	Volkswagen	Volkswagen	Beetle	VGA	81	2.0	4
	2015	Volkswagen	Volkswagen	Beetle	VGA	83	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Beetle	VGA	91	2.0	4
	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	80	1.8	4
	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	82	2.0	4
	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	84	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Beetle Convertible	VGA	92	2.0	4
	2015	Volkswagen	Volkswagen	CC	VGA	58	2.0	4
	2015	Volkswagen	Volkswagen	CC	VGA	59	2.0	4
	2015	Volkswagen	Volkswagen	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen	Volkswagen	Eos	VGA	36	2.0	4
	2015	Volkswagen	Volkswagen	Golf	VGA	85	1.8	4
	2015	Volkswagen	Volkswagen	GTI	VGA	1	2.0	4
	2015	Volkswagen	Volkswagen	GTI	VGA	8	2.0	4
	2015	Volkswagen	Volkswagen	Jetta	VGA	86	2.0	4
Error in RoY	2015	Volkswagen	Volkswagen	Passat	VGA	90	1.8	4
	2015	Volkswagen	Volkswagen	Passat	VGA	88	1.8	4
Diesel; OK for web VW comment	2015	Volkswagen	Volkswagen	Passat	VGA	89	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Passat	VGA	87	2.0	4
	2015	Volkswagen	Volkswagen	Passat	VGA	55	3.6	6
	2015	Volkswagen	Volkswagen	Tiguan	VGA	39	2.0	4
	2015	Volkswagen	Volkswagen	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen	Volkswagen	Touareg	VGA	13	3.0	6
	2015	Volkswagen	Volkswagen	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.6000	39.4000	31.1546
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995
Auto(S8)	17	24	19				20.8000	32.9000	24.9252

Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M5)	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S	36	42	34	38.1000	60.2000	46.4219
Manual(M6)	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

Automatically increased adjusted combined CO2 value; Please revise Verify as needed

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C	
21.5783	30.5883	24.8755		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
19.8843	28.2637	22.9455		TC	Turbocharged	SA	Semi-Automatic	8		
21.5783	30.5883	24.8755		TC	Turbocharged	SA	Semi-Automatic	8		
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6		
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C	
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8		
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8		
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8		
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8		
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8		
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8		
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8		
20.9913	28.1265	23.6964		TC	Turbocharged	SA	Semi-Automatic	8		
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6		
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6		
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8		
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic	8		
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8		
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8		
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8		
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6		
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6		
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au	
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic	8		
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6		
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6		
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au	
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8		
16.7285	23.6581	19.2682		SC	Supercharged	SA	Semi-Automatic	8		

22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	SA	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	SA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SA	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	SA	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally A	AMS	Automated	7
9.7957	16.2453	11.9264	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G NA	Naturally A	AMS	Automated	7
14.0224	20.0427	16.2140	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
24.7637	32.6943	27.7980	TC	Turbocharged	SA	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
30.5143	40.5292	34.3319	TC	Turbocharged	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	SA	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
29.6183	40.1317	33.5766	TC	Turbocharged	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	SA	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
25.3353	37.0021	29.5244	TC	Turbocharged	M	Manual	5
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	M	Manual	6
24.6629	33.9684	28.1307	NA	Naturally Aspirated	M	Manual	5
24.3335	35.7288	28.4112	TC	Turbocharged	SA	Semi-Auto	6
24.1899	35.2585	28.1693	TC	Turbocharged	M	Manual	5
29.8946	42.1145	34.3842	TC	Turbocharged	AMS	Automated	6
29.8256	43.5614	34.7575	TC	Turbocharged	M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	SA	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SA	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SA	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	SA	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		389	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV06.3VUM	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT02.0AUH	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAT03.0NU3			5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT03.0ALT	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAE02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAE02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t0VSE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02t0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t0VUC	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.	15		G	Gasoline (I
N	N	F	2-Wheel Drive, Front	FVGAV02t0VBD	15		G	Gasoline (Regular
Y	N	A	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel Drive, Front	FVGAV02t0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAE02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			86	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	79	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	79	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			86	10		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			91	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			91	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			91	12		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	81	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	12				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	12				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					94	25
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Not exempt					94	25
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			100	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			100	15		
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			107	15		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			90	28		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					84	17
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					84	17
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Ultra (15 ppm, max gaso	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Truck						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt						
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	13				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	81	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					94	25
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			86	10		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			90	13		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			90	13		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	13				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	84	13				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt	81	10				
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			98	16		
MPG	Miles per Gallon	Unleaded Recommended	Not exempt					94	25
MPG	Miles per Gallon	Unleaded Recommended	Not exempt			100	15		
MPG	Miles per Gallon	Unleaded Recommended	Truck						

MPG	miles per gallon	Not exempt	74	13				
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt	89	11				
MPG	miles per gallon	Not exempt	89	11				
MPG	miles per gallon	Not exempt	86	7				
MPG	miles per gallon	Not exempt	86	7				
MPG	miles per gallon	Not exempt	102	13				
MPG	miles per gallon	Not exempt	102	13				
MPG	miles per gallon	Not exempt			101	11		
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt						
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt					85	15
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	81	7				
MPG	miles per gallon	Not exempt	94	13				
MPG	miles per gallon	Not exempt	94	13				
MPG	miles per gallon	Not exempt	94	13				
MPG	miles per gallon	Not exempt	77	11				
MPG	miles per gallon	Not exempt					93	16
MPG	miles per gallon	Not exempt					93	16
MPG	miles per gallon	Not exempt					93	16
MPG	miles per gallon	Not exempt			94	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Not exempt			102	16		
MPG	miles per gallon	Truck						
MPG	miles per gallon	Truck						
MPG	miles per gallon	Truck						
MPG	miles per gallon	Truck						

Annual Fu	EPA Calcu	Comment	City2 FE (U	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	eng code correction	15	22	18				19.5
2200	2200								
2500	2500	eng code correction	14	20	16				17.4
2300	2300	eng code correction	15	22	18				19.5
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2400	2400	engine codes corrected and applicable data added	15	21	17				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							
3000	3000								

2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
4400	4400				
3550	3550	Release date change			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1750	1750				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1900	1900				
1900	1900				
1900	1900				
1650	1650				
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

Hwy2	Unrd Comb2	Unrd Cnty2	Unrd Hwy2	Unrd Comb2	Unrd Range2	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
SB.									
on changed to #1 for 1.8L engine code CNSB									
L engine code CNTC.									
ed to #2 for 2.0L engine code CNTC, GHG rating corrected									
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	85	MPG miles per gallon
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E85)	85	MPG miles per gallon
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	85	MPG miles per gallon
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E85)	85	MPG miles per gallon
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E85)	85	MPG miles per gallon

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
2600	400	281	347	2600	SIDI; FFV;	2	24	Compact Cars
				SIDI;	2	24		Compact Cars
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompact Cars
2600	400	281	347	2600	SIDI; FFV;	2	23	Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Station Wag
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	231		Small SUV 4WD

or engine code CDMA and all TT models.					SIDI;	2	23	Subcompact Cars
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seate
						2	21	Two Seaters
						2	21	Two Seate
					SIDI & PFI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						1	14	Compact Cars
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Cars
						2	25	Midsize Ca
						2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

sc	Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
	car	Vehicle Specific 5-cycle	2/25/2014		16011		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		16013		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		16012		N	N		
	car	Vehicle Specific 5-cycle	1/15/2014		16197		N	N		
	car	Derived 5-cycle label	6/9/2014		15670		N	N		
	car	Derived 5-cycle label	6/9/2014		16311		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15675		N	N		
	car	Derived 5-cycle label	6/9/2014		16313		N	N		
	car	Derived 5-cycle label	6/9/2014		16312		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15676		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15673		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15674		N	N		
	car	Derived 5-cycle label	6/9/2014		16062		N	N		
	car	Vehicle Specific 5-cycle	6/10/2014		15458		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		16061		N	N		
	car	Vehicle Specific 5-cycle	6/10/2014		15459		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15647		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15385		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15456		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15648		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15386		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15442		N	N		
	cars	Derived 5-cycle label	6/9/2014		16217		N	N		
	car	Derived 5-cycle label	8/4/2014		16057		N	N		
	car	Vehicle Specific 5-cycle	8/4/2014		15650		N	N		
		Derived 5-cycle label	6/9/2014		16034		N	N		
		Vehicle Specific 5-cycle	6/19/2014		16060		N	N		
		Vehicle Specific 5-cycle	6/10/2014		15460		N	N		
		Vehicle Specific 5-cycle	6/19/2014		15999		N	N		
	D	Vehicle Specific 5-cycle	6/12/2014		15408		N	N		
	D	Derived 5-cycle label	6/9/2014		15711		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15493		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15497		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15601		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15598		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15492		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15496		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15600		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15597		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15589		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		15590		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15577		N	N		
	car	Vehicle Specific 5-cycle	8/4/2014		15651		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		16064		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		16067		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		16065		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		16068		N	N		
	car	Vehicle Specific 5-cycle	6/19/2014		16066		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15576		N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15575		N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15400		N	N		
		Vehicle Specific 5-cycle	6/19/2014		16059		N	N		

car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/1/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
car	Vehicle Specific 5-cycle label	7/1/2014	15682	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	8/25/2014	16339	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Derived 5-cycle label	8/25/2014	16340	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	N	N
car	Derived 5-cycle label	7/14/2014	16363	N	N
car	Derived 5-cycle label	7/14/2014	16273	N	N
car	Derived 5-cycle label	7/14/2014	16275	N	N
car	Derived 5-cycle label	7/28/2014	16283	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic System
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic System
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, and		SYSTEM
N	N	Engine Code	Y	CTGA. A8	Deactivation	Start Stop Tech	nology, and		
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, and		SYSTEM
N	N	Engine Code	Y	CTGA. A8	Deactivation	Start Stop Tech	nology, and		
N	N	Engine Code	Y	CTNA with cylinder	deactivation	intake and	Exhaust cam timing is electronically con		
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUC	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hybrid	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	N	DE CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y		Continuousl	y intake and exhaust cam adjustment	
N	N	Engine Code	N	: CFS	Y		Continuousl	y intake and exhaust cam adjustment	
N	N	Engine Code	Y	CRDB (RS7)	Deactivation	of cylinder	Cam		
N	N	Engine Code	N	CYFB - Audi S3	Y		CONTINUOU	SLY VARIABLE VALVE TIMING -	Audi Valve System - Exhaust
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinder	Cam		
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinder	Cam		
N	N	Engine Code	Y	CYCA. 6810	Deactivation	Technology	Cam		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	SYSTEM

| | | |

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									

alves is a valve lift of zero (all valves closed), but fuel injection and ignition are active and the engine is

alves is a valve lift of zero (all valves closed), but fuel injection and ignition are active and the engine is
tolled and hydraulically adjusted.

1	Lithium Ion	266	5.00	37.0	On-Board

EMENT
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ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves is a valve lift of zero (all valves closed), but fuel injection and ignition are active and the engine is
valves only

alves is a valve lift of zero (all valves closed), but fuel injection and ignition are active and the engine is
alves is a valve lift of zero (all valves closed), but fuel injection and ignition are active and the engine is
alves is a valve lift of zero (all valves closed), but fuel injection and ignition are active and the engine is

alves on a single camshaft. The first valve lift profile is for small valve lifts (all valves closed), the second profile is for large valve lifts (the exhaust valves are opened), the injection and ignition are deactivated and the cylinder is not filled.
ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile is for small valve lifts (all valves closed), the second profile is for large valve lifts (the exhaust valves are opened), the injection and ignition are deactivated and the cylinder is not filled.
ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile is for small valve lifts (all valves closed), the second profile is for large valve lifts (the exhaust valves are opened), the injection and ignition are deactivated and the cylinder is not filled.
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.
C/HADS(1) - mid range configuration is in the Bugatti Veyron and Grand Sport.
VALVED CONTROL UOUSLY VVT
VALVED CONTROL UOUSLY VVT
VALVED CONTROL UOUSLY VVT
ECHANICAL-HYDRAULIC
AMS
AMS
AMS
AMS
onv.
AMS
AMS
AMS
onv.
controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

AKE CAMS
AMS
le Conv.
onv.

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
ed above 3									
ed above 3									
Electrical Regen Brake	Both	Y						1	AC Induction
ed above 3									
ed above 3									
ed above 3									
ed above 3									
ed above 3									

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
		40		GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200

	GDI	Spark Ignition Direct Injection	N	5W40
	GDI	Spark Ignition Direct Injection	N	5W40
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
	MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
	MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
	MFI	Multipoint/s	N	5W30 VW
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
	MFI	Multipoint/s	N	5W30 VW
	GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common F	N	5W40 VW
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	50700	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	50700	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500	Auto(AM-S7)	Auto(AM-S7)						
N	50500	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500	Auto(AM-S7)	Auto(AM-S7)						
N	50500	Manual(M6)	Manual(M6)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(AM-S7)	Auto(AM-S7)						
N	50700	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						

N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
JVW50500	No	Auto(S8)	Auto(S8)	
N 50500	No	Auto(AM-S7)	Auto(AM-S7)	
Y50700	Yes	Auto(AM-S	Auto(AM-S	
Y50700	Yes	Auto(AM-S7)	Auto(AM-S7)	
N50700	No	Auto(AM-S	Auto(AM-S	VENENO
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[redacted]	EPA Calculated Gas G	[redacted]	[redacted] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.0APA	9		
36.2	[redacted]	7	7	FVGAV02.0APA	9		
34.3	[redacted]	6	6	FVGAV02.0APA	9		
35.2	[redacted]	7	7	FVGAV02.0APA	9		
35.4	[redacted]	7	7	FVGAV02.0AUB	5		
32.7	[redacted]	6	6	FVGAJ02.0AUF	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
30.1	[redacted]	5	5	FVGAJ02.0AUF	5		
32.7	[redacted]	6	6	FVGAJ02.0AUF	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
36.9	[redacted]	7	7	FVGAV02.0AUB	5		
30.0	[redacted]	5	5	FVGAV02.0AUB	5		
28.1	[redacted]	5	5	FVGAJ03.0AUD	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
27.9	[redacted]	5	5	FVGAJ03.0AUD	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
28.0	[redacted]	5	5	FVGAV04.0NUA	5		
36.9	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
27.6	[redacted]	5	5	FVGAV04.0NUA	5		
21.1	[redacted]	4	4	FVGAV06.3VUM	5		
31.2	[redacted]	6	6	FVGAJ02.0AUF	5		
30.0	[redacted]	5	5	FVGAV02.0AUA	5		
29.5	[redacted]	5	5	FVGAV02.0AUA	5		
29.6	[redacted]	5	5	FVGAJ02.0AUF	5		
27.2	[redacted]	5	5	FVGAJ03.0AUD	5		
34.3	[redacted]	7	5	FVGAJ03.0NU4	5		
34.0	[redacted]	6	6	FVGAT02.0AUH	5		
28.1	[redacted]	5	4	FVGAT03.0NU3	5		
23.1	[redacted]	4	4	FVGAT03.0ALT	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
22.8	[redacted]	4	4	FVGAV04.2NLB	5		
22.6	[redacted]	4	4	FVGAV04.2NLB	5		
24.1	[redacted]	4	4	FVGAV04.0NUA	5		
33.2	[redacted]	6	6	FVGAV02.0AUA	5		
26.9	[redacted]	5	5	FVGAJ03.0AUD	5		
23.5	[redacted]	5	5	FVGAJ03.0AUD	5		
26.9	[redacted]	5	5	FVGAJ03.0AUD	5		
23.5	[redacted]	5	5	FVGAJ03.0AUD	5		
26.4	[redacted]	5	5	FVGAJ03.0AUD	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.0	[redacted]	5	5	FVGAV04.0NUA	5		
24.9	[redacted]	4	4	FVGAJ03.0AUD	5		

33.3	[redacted]	6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.	5
14.6		1	1 FVGAV06.5LLR	5
15.8		1	1 FVGAV06.	5
20.0		3	3 FVGAV05.2NLE	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
33.1		6	6 FVGAV02.0VPD	7
46.4		8	7 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
33.1		6	6 FVGAV02.0VPD	7
45.3		8	7 FVGAV02.0VAL	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
39.3		7	7 FVGAV02.0APA	9
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
35.9		7	7 FVGAV02.0VUC	5
37.7		7	7 FVGAV02.	7
37.3		7	7 FVGAV02.0VPD	7
46.2		8	7 FVGAV02.	5
46.9		8	7 FVGAV02.0VAL	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

| | | |

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7

FVGAV02.	5
FVGAV02.0VBD	5

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 F	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	410	290	356			
	0		398	277	343			
		1500	446	314	386			
		1000	410	290	356			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1000	421	315	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2000	496	347	429			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		2500	488	321	413			
		3250	519	341	439			
		2500	488	321	413			
		3250	519	341	439			
		2500	500	341	428			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			
		4000	528	373	458			

0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	11000	831	523	692
	6750	629	441	544
1500		357	270	318
1250		372	270	326
0		377	302	343
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2250		350	240	300
750		358	271	319
750		355	258	311
1500		357	259	313
1500		363	248	311
1500		366	251	314
2750		340	242	296
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char
309.0	191.0	255.9	378.7	267.1	328.5
289.0	188.0	243.6	362.1	255.5	314.1
305.0	200.0	257.8	378.6	280.1	334.3
294.0	198.0	250.8	366.0	271.0	323.2
292.0	199.0	250.2	373.7	280.2	331.6
323.0	206.0	270.4	410.3	289.6	356.0
321.2	202.4	267.7	398.0	276.6	343.4
353.0	224.0	295.0	445.7	313.9	386.4
323.0	206.0	270.4	410.3	289.6	356.0
321.2	202.4	267.7	398.0	276.6	343.4
282.0	189.0	240.2	360.0	272.0	320.4
358.0	219.0	295.4	452.0	306.0	386.3
383.5	233.0	315.8	481.7	326.0	411.6
331.0	194.0	269.4	415.7	267.3	348.9
385.0	236.0	318.0	492.9	320.9	415.6
331.0	194.0	269.4	415.7	267.3	348.9
376.5	225.0	308.3	473.4	302.9	396.7
391.0	224.0	315.9	483.9	299.0	400.7
339.0	198.0	275.6	425.6	280.1	360.1
376.5	225.0	308.3	473.4	302.9	396.7
396.0	226.0	319.5	492.3	309.7	410.1
515.0	310.0	422.8	640.3	403.3	533.6
332.0	225.0	283.9	420.9	315.2	373.3
357.5	223.0	297.0	451.0	312.5	388.7
357.0	230.0	299.9	445.6	315.7	387.1
358.0	230.0	300.4	451.6	321.9	393.2
390.0	251.0	327.4	496.0	347.0	429.0
348.0	231.0	295.4	430.5	328.5	384.6
380.0	223.0	309.4	369.0	298.0	337.0
446.0	260.0	362.3	541.0	369.0	463.6
458.0	295.0	384.6	569.6	409.5	497.6
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
466.0	296.0	389.5	562.0	379.0	479.6
463.0	307.0	392.8	558.0	398.0	486.0
467.0	253.0	370.7	573.0	336.1	466.4
311.0	214.0	267.4	381.4	289.2	339.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
427.0	269.0	355.9	528.0	372.7	458.1

312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
708.0	392.0	565.8	831.0	523.0	692.4
524.0	346.0	443.9	628.6	441.0	544.2
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
272.0	169.0	225.6	350.1	239.8	300.5
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
302.0	179.0	246.6	356.6	259.3	312.8
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
260.0	169.0	219.0	340.1	241.6	295.8
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT_
	N	3.7	3.7			
	N	3.6	3.6			
	N	3.8	3.8			
	N	3.7	3.7			
	N	3.7	3.7			
	N	4.0	4.0			
	N	3.8	3.8			
	N	4.3	4.3			
	N	4.0	4.0			
	N	3.8	3.8			
	N	3.6	3.6			
	N	4.3	4.3			
	N	4.5	4.5			
	N	3.4	3.4			
	N	4.8	4.8			
	N	3.4	3.4			
	N	4.5	4.5			
	N	4.5	4.5			
	N	3.6	3.6			
	N	4.5	4.5			
	N	4.5	4.5			
	N	5.9	5.9			
	N	4.2	4.2			
	N	4.3	4.3			
	N	4.3	4.3			
	N	4.3	4.3			
	N	4.8	4.8			
	N	3.7	3.7			
	N	3.8	3.8			
	N	4.5	4.5			
	N	5.6	5.6			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.9	5.9			
	N	7.1	7.1			
	N	6.2	6.2			
	N	7.1	7.1			
	N	5.6	5.6			
	N	5.6	5.6			
	N	5.3	5.3			
	N	3.8	3.8			
	N	4.8	4.8			
	N	5.0	5.0			
	N	4.8	4.8			
	N	5.0	5.0			
	N	4.8	4.8			
	N	5.0	5.0			
	N	5.0	5.0			
	N	5.0	5.0			
	N	5.3	5.3			

N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	8.3	8.3
N	7.7	7.7
N	6.2	6.2
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	3.8	3.8
N	2.9	2.9
N	3.7	3.7
N	4.0	4.0
N	3.8	3.8
N	2.9	2.9
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.3	3.3
N	3.6	3.6
N	3.6	3.6
N	3.6	3.6
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

| [illegible] | [illegible] | [illegible] |

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 6/26/2014 2:17:22 PM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of June 23, 2014

Thanks Dave, I corrected the adjusted highway CO2 rounding error for Index #090.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, June 26, 2014 9:53 AM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of June 23, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of June 23, 2014

Attached are the data in Verify as of June 23, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on July 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Thur 6/26/2014 6:58:37 PM
Subject: RE: e-Golf Testing

Hi Ex. 7, I talked to Dan McBride about the current probe vs CAN address. It depended on the context. He said no if it's a PHEV but its occurred to me the eGolf is a BEV. On-board measurement isn't required on BEVs unless we are doing the Multi-cycle test procedure.

It turns out Ex. 7 (?) has been communicating with Dan about connectors and hook ups. Since the VW charger is a wall charger without a plug, they will work something out for a connection.

From: Ex. 7 @vw.com]
Sent: Thursday, June 19, 2014 10:55 AM
To: Snyder, Jim
Subject: e-Golf Testing

Hello Jim:

Thanks for the discussion just now. You referenced page 10 of a handbook that that includes NEMA codes for electrical connections. Perhaps we have seen this handbook and I just don't recall, but is this handbook something available to manufacturers?

Regards,

Ex. 7

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone

Cell: (

E-Mai

Ex. 7

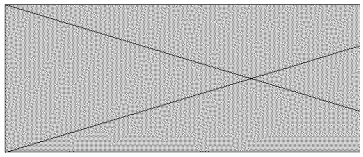
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 6/27/2014 1:08:15 PM
Subject: A.M. NEWSCAST: Switch supplier Delphi subpoenaed in GM probe | Ford updates Focus ST | Audi's plug-in play | Google for the car

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June 27, 2014

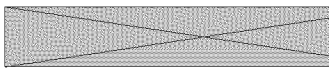
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. .

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7

Ex. 7

From: Ex. 7
Sent: Fri 6/27/2014 3:03:03 PM
Subject: EPA EV Testing Lab Charger Install

Hi Jim,

I have been talking with Dan McBryde in the lab about installing EV chargers should our upcoming eGolf be tested in EPA. Dan is on vacation all next week, but he mentioned that we could stop into the lab charge monitoring area (by reception??) and take a look at the general set up. Would you mind walking us down there after our meeting on Tuesday afternoon? Should only take a few minutes.

Thanks

Ex. 7

Ex. 7

Engineering and Environmental Office

Ex. 7

To: Ex. 7 @vw.com]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7
From: Snyder, Jim
Sent: Fri 6/27/2014 3:11:20 PM
Subject: RE: EPA EV Testing Lab Charger Install

Sure we can do that.

From: Ex. 7 @vw.com]
Sent: Friday, June 27, 2014 11:03 AM
To: Snyder, Jim
Cc: Ex. 7
Subject: EPA EV Testing Lab Charger Install

Hi Jim,

I have been talking with Dan McBryde in the lab about installing EV chargers should our upcoming eGolf be tested in EPA. Dan is on vacation all next week, but he mentioned that we could stop into the lab charge monitoring area (by reception??) and take a look at the general set up. Would you mind walking us down there after our meeting on Tuesday afternoon? Should only take a few minutes.

Thanks

Ex. 7

Ex. 7

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Fri 6/27/2014 4:51:32 PM
Subject: PHEV Mtg

Ex. 7 I talked to Dave Good and showed him the questions. While he will be in next week but he thinks we're better off waiting for Rob French too. The spreadsheet is Rob's.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7
From: Ex. 7
Sent: Fri 6/27/2014 5:52:37 PM
Subject: RE: EPA EV Testing Lab Charger Install

Thanks, Jim. See you next week.

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Friday, June 27, 2014 11:11 AM
To: Ex. 7
Cc: Ex. 7
Subject: RE: EPA EV Testing Lab Charger Install

Sure we can do that.

From: Ex. 7 @vw.com]
Sent: Friday, June 27, 2014 11:03 AM
To: Snyder, Jim
Cc: Ex. 7
Subject: EPA EV Testing Lab Charger Install

Hi Jim,

I have been talking with Dan McBryde in the lab about installing EV chargers should our upcoming eGolf be tested in EPA. Dan is on vacation all next week, but he mentioned that we could stop into the lab charge monitoring area (by reception??) and take a look at the general set up. Would you mind walking us down there after our meeting on Tuesday afternoon? Should only take a few minutes.

Thanks

Ex. 7

Ex. 7

Engineering and Environmental Office

Ex. 7

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 Good, David
Optional Attendees: Ex. 7
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM
2015 PHEV calculations _Berechnungsvorlage_02.pptx

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 Good, David
Optional Attendees: Ex. 7 (EEO)
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM
2015 PHEV calculations_Berechnungsvorlage_02.pptx

When: Thursday, July 10, 2014 9:30 AM-10:30 AM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 Good, David
Optional Attendees: Ex. 7
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
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2015 PHEV calculations _Berechnungsvorlage_02.pptx

From: Ex. 7
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM

;

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Fri 6/27/2014 6:13:00 PM
Subject: RE: PHEV Mtg

That's fine. I found a new room and rescheduled it.

From: Ex. 7 @vw.com]
Sent: Friday, June 27, 2014 1:53 PM
To: Snyder, Jim
Subject: FW: PHEV Mtg

Hello Jim,

Sorry for the second email but Thursday July 10th at 9 or 10 would work best for me. I will be out of the office Monday - Wednesday but if that works better for you go ahead and schedule for earlier in the week. It is more important for Ex. 7 to meet with you.

Thanks,

Ex. 7

From: Ex. 7
Sent: Friday, June 27, 2014 1:48 PM
To: 'Snyder, Jim'
Subject: RE: PHEV Mtg

Hello Jim,

I talked to Ex. 7 and we agree it would be best to move the meeting to the following week. Any day should work but if possible we would like to schedule the meeting for the morning so some German colleagues can call in.

Thank you and best regards.

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Friday, June 27, 2014 12:52 PM
To: Ex. 7
Subject: PHEV Mtg

Ex. 7 I talked to Dave Good and showed him the questions. While he will be in next week but he thinks we're better off waiting for Rob French too. The spreadsheet is Rob's.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Tamborra, Nick (EEO)
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM

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From: Tamborra, Nick (EEO)
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
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;

From: Ex. 7
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: VW PHEV label calculation and BEV testing
Start Date/Time: Thur 7/10/2014 1:30:00 PM
End Date/Time: Thur 7/10/2014 2:30:00 PM

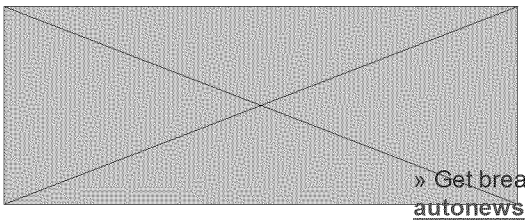
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 6/27/2014 8:36:36 PM
Subject: DAILY: GM's current product chief was part of '05 ignition-flaw debate | Delphi involved in 2 U.S. probes | Tougher U.S. auto-safety measure proposed | Marchionne's 'Cinderella' story

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THE GM RECALL

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6:46 am U.S. ET | Jun 27

A top product-development executive still working at General Motors was involved in deliberations about a deadly ignition flaw kept from the public, newly released documents indicate. ... » READ

Delphi now part of 2 federal investigations

1:29 pm U.S. ET | Jun 27

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6:52 pm U.S. ET | Jun 26

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Fiat Chrysler, Marchionne prepare to sell Wall Street on 'Cinderella' story

3:34 pm U.S. ET | Jun 27

Sergio Marchionne needs a New York stock market listing to bring in the investors required to fund future growth at Fiat Chrysler, but a lukewarm response to the CEO's most recent Wall Street launch suggests he has a bumpy journey ahead. ... » READ

Ford, Mercedes, Toyota tops in brand loyalty in 1st quarter, IHS says

12:19 pm U.S. ET | Jun 27

The Ford brand had the auto industry's highest loyalty rate among new-vehicle buyers in the first quarter, followed by Mercedes-Benz and Toyota. ... » READ

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Honda, Nissan, Mazda expand recalls over Takata airbag flaw

GM halts sale of some 2013-14 Chevy Cruze models for airbag glitch

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Ford to replace 2.0-liter EcoBoost engine after just 4 model years

WEEKLY NEWS QUIZ

» Quiz: New Edge, fancy toys and airbag recalls ...

Renault-Nissan, Daimler plan $1.4 billion small-car plant in Mexico

UPDATED: 6/27/14 12:02 pm ET - adds photo, video link

9:46 am U.S. ET | Jun 27



Airbag accident, lawsuit prompt GM to recall Cruze

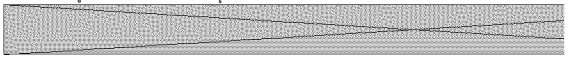
9:12 pm U.S. ET | Jun 26

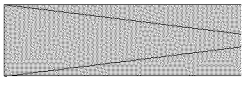


GM was urged in 2004 report to study Cobalt's ignition-airbag link

UPDATED: 6/27/14 2:37 pm ET - adds links

12:20 pm U.S. ET | Jun 27





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» Oct. 15 - Best Dealerships To Work For

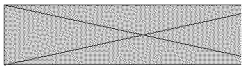
» Nov. 21 - Automobilwoche Kongress



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» July 30 - Marketing Market Price

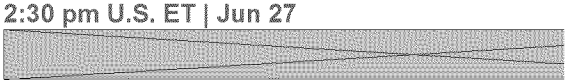
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UPCOMING WEBINARS

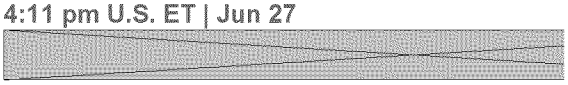
Part of Corvette-swallowing sinkhole will be preserved, museum says

2:30 pm U.S. ET | Jun 27



Fiat 500 Abrath with automatic transmission should broaden appeal, exec says

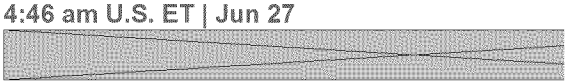
4:11 pm U.S. ET | Jun 27



Audi plans plug-in hybrid offensive

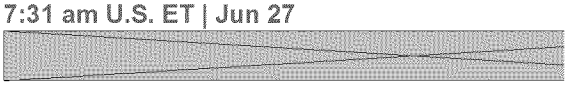
UPDATED: 6/27/14 5:40 am ET - adds U.S./China sales start

4:46 am U.S. ET | Jun 27



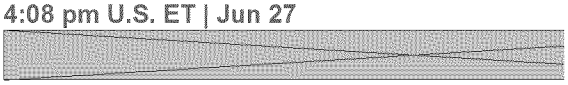
Autoliv agrees to settle U.S. securities class action for $22.5 million

7:31 am U.S. ET | Jun 27



Hitachi completes construction of largest plant at Georgia complex

4:08 pm U.S. ET | Jun 27



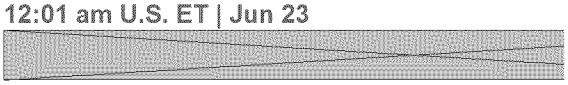
Nissan's Mann: From Sex Pistols to Buckingham Palace

12:01 am U.S. ET | Jun 23



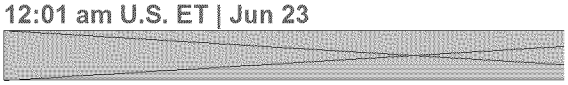
Toyota ups its game on telematics in Japan

12:01 am U.S. ET | Jun 23



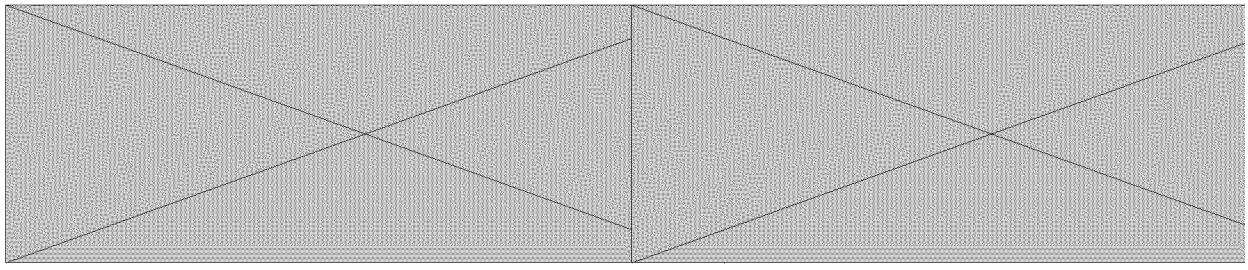
Dealership buy-sells jump in first quarter

12:01 am U.S. ET | Jun 23



» July 16 -

Plugging the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



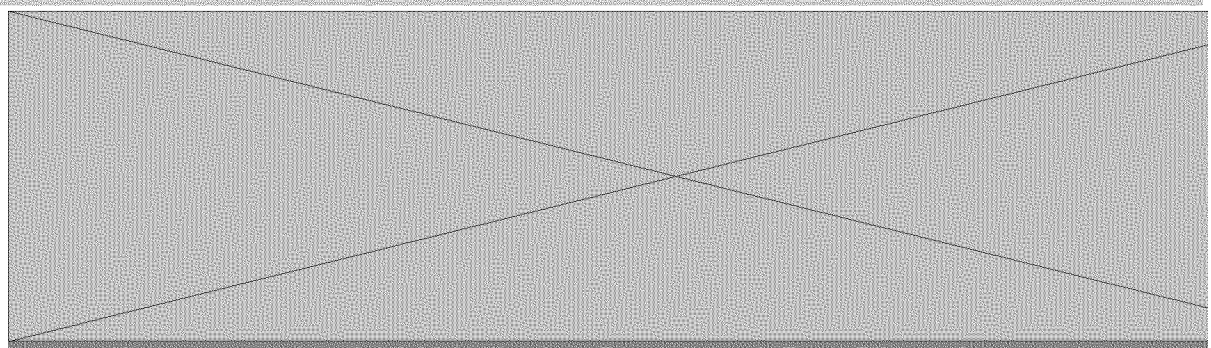
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: 3rd Carbon Dioxide Utilisation Summit.
Sent: Mon 6/30/2014 9:05:21 AM
Subject: Bremen Hosts 3rd Carbon Dioxide Utilisation Summit.

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- Updates on Industrial CO2 Utilisation: Breakthrough From Pilot to Commercial -



We are pleased to announce that ACI's 3rd Carbon Dioxide Utilisation Summit Conference will take place on 22-23 October 2014 in Bremen, Germany.

The third edition of this cutting-edge event will ultimately discover how to turn waste CO2 into profitable, commercially viable opportunities and the best ways to progress from pilot stage to full scale operational business.

Take advantage of the 20% Early Bird discount and save £300 on your registration fee!

Only valid till 16th July

REGISTRATION & INFORMATION

To confirm your participation contact: Rohan Baryah on:



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The conference will address both the technical and commercial aspects of CO2 utilisation in Europe and across the globe. With individual case study analysis, you can join the investigation on the different applications of emerging and existing CO2 applications and find out how to maximise usage from CO2 waste. Applications examined will include, Petrochemicals, Chemicals, Urea, Fuel and Power/Energy sectors.

Conference Programme

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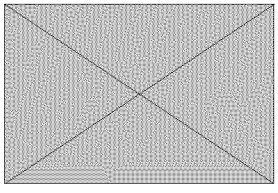


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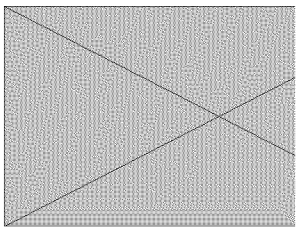
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please contact:

Rohan Baryah

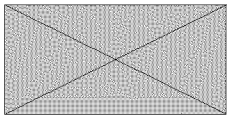
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Location



Bremen, Germany

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Tuesday 21st October 2014:

During the afternoon of 21st October 2014, up to 40 conference attendees will receive a unique opportunity to visit **Audi E-Gas Plant: the world's first power-to-gas plant built on an industrial scale to produce synthetic natural gas, using waste CO2.**

There is **no extra charge** to attend the site visit, but spaces are limited and allocated on a **first come first served basis**. Please register your attendance for the site visit when booking for the conference. Transport will be provided to and from conference venue.

Key Topics:

- **The future of commercial CO2 Utilisation**
- **Power to Gas CO2 Utilisation projects in**

Europe

- **What will be the major source of carbon dioxide in the future**
- **Getting value from Carbon Capture & Transport**
- **Recycling carbon dioxide for the production of renewable fuel**
- Carbon dioxide as hydrogen/ energy
- Chemical & Electrochemical Conversion of CO2 Opportunities and Challenges
- Overcoming critical barriers in adopting CO2 Utilisation Technologies and Projects
- Understanding the value chain and potential of CO2 Utilisation market size
- Biotechnology based on CO2- not a renewable but a recyclable carbon source
- Case studies: Carbon dioxide utilisation projects
- From waste to value: Conversion of CO2 Opportunities and Challenges
- Key research activities on Chemical Co2 Utilisation

Who Should Attend:

ACI's 3rd Carbon Dioxide Utilisation Summit is designed to appeal to anyone interested in learning about the future of the global CO2 utilisation industry.

If you are looking for a comprehensive progress update on the global CO2 utilisation industry, including a growth outlook and updates on the latest technological advancements, then look no further than ACI's 3rd Carbon Dioxide Utilisation Summit-2014

ACI EUROPE, 5/13 Great Suffolk Street, SE1 0NS London

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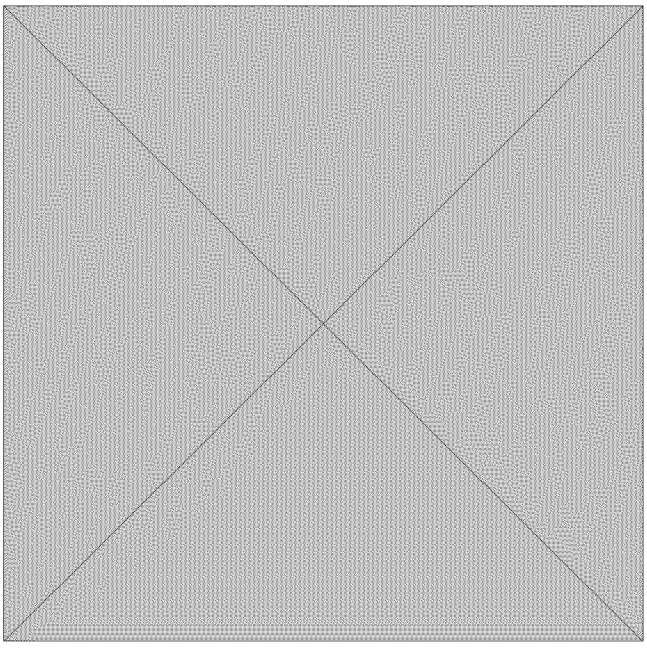
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: DrivingtheNation.com newsletter
Sent: Mon 6/30/2014 2:12:23 PM
Subject: 6/29/14 - Tesla walkaround, a patent lawyer on Tesla, pollution is the biggest killer, ,John Batchelor radio show, washingtonpost.com, list your used car for free

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- 2011 Kia Optima lx
- 2013 Subaru Outback 2.5i premium
- 2014 Nissan Maxima s/sv
- 2013 Nissan Altima 2.5/s/sv/sl
- 2012 Dodge Grand caravan sxt

Warren Brown and Lou Ann Hammon about cars on www.washingtonpost.co 27, 2014





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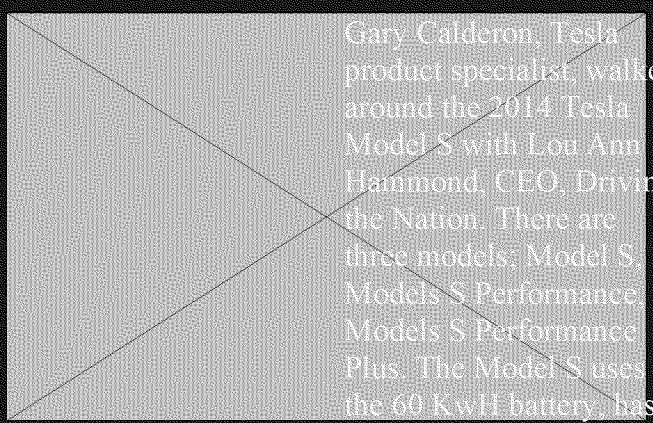
A patent lawyer, and Tesla owner, talks about open

sourcing patents on Driving the Nation

David Cabello is a partner at Wong Cabello Lutsch Rutherford, an intellectual property law firm. Cabello has been named Texas Super Lawyer® in Intellectual Property Litigation for the last three years. He also owns a Tesla. Cabello talked to John Batchelor, host of the John Batchelor radio show, and Lou Ann Hammond, CEO, Driving [...]

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Tesla product specialist Gary Calderon walks around the 2014 Tesla S on Driving the Nation

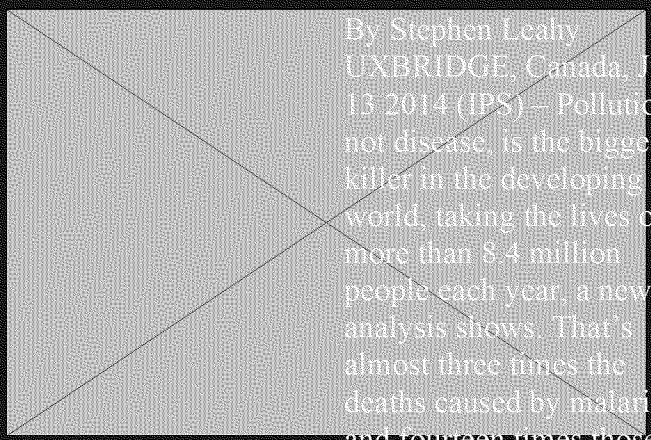


Gary Calderon, Tesla product specialist, walked around the 2014 Tesla Model S with Lou Ann Hammond, CEO, Driving the Nation. There are three models; Model S, Models S Performance, Models S Performance Plus. The Model S uses the 60 Kwh battery, has a driving range of 208 miles of pure EV, goes 0-60 in

5.9 [...]

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In Developing World, Pollution Kills More Than Disease on Driving the Nation

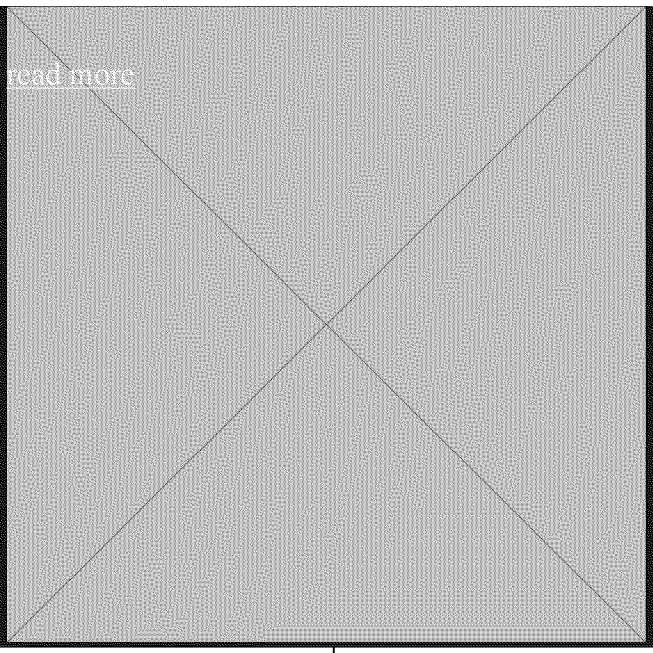


By Stephen Leahy UXBRIDGE, Canada, Jun 13 2014 (IPS) – Pollution, not disease, is the biggest killer in the developing world, taking the lives of more than 8.4 million people each year, a new analysis shows. That's almost three times the deaths caused by malaria and fourteen times those caused by HIV/AIDs. However, pollution receives [...]

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Warren Brown and Lou Ann Hammond chat about cars on www.washingtonpost.com June 20, 2014

Good morning Warren and Friends How a gasoline? Gas prices are back at $4.00 a g Northern CA. What are you paying and do seem high to you anymore? The last three driven a Toyota 4Runner a Lexus RX450 GS460, the big Papa bear 3 [...]

					
	New Car Reviews 2014 Volkswagen Touareg TDI 2014 Hyundai Sonata 2014 Jeep Grand Cherokee diesel 2014 Infiniti Q70				

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To: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 6/30/2014 6:40:04 PM
Subject: RE: VW Testing

Bill, Did Vince ever get back to you on this? I never caught him at his desk today.

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, June 30, 2014 1:33 PM
To: Mazaitis, Vincent
Cc: Snyder, Jim
Subject: VW Testing

Hello Vince,

While delivering four Volkswagen test vehicles at your facility this morning, we were informed by Ben that you would likely test one of the diesel models on Tuesday, instead of Wednesday as planned. Please confirm for us which vehicle will be tested and what time we should expect it to begin? We plan to have someone on hand to witness the tests.

Also please let us know when you intend to start testing on Wednesday and in what order the remaining vehicles will be tested.

Thanks,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 6/30/2014 6:41:11 PM
Subject: RE: VW Testing

No I was just about to start calling. Can you follow up?

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, June 30, 2014 2:40 PM
To: Rodgers, William (EEO)
Subject: RE: VW Testing

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To: Mazaitis, Vincent
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Thanks,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 6/30/2014 6:42:52 PM
Subject: RE: VW Testing

I'll look into it.

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, June 30, 2014 2:41 PM
To: Snyder, Jim
Subject: RE: VW Testing

No I was just about to start calling. Can you follow up?

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To: Rodgers, William (EEO)
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Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Tue 7/1/2014 10:39:44 AM
Subject: RE: VW Testing

Hello Bill,

Sorry for the late response.

The vehicle to be tested is VW361 50070/15. I'm not sure when it is testing.

Please have your witness here at 7:00 am.

Thanks,

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, June 30, 2014 1:33 PM
To: Mazaitis, Vincent
Cc: Snyder, Jim
Subject: VW Testing

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Also please let us know when you intend to start testing on Wednesday and in what order the remaining vehicles will be tested.

Thanks,

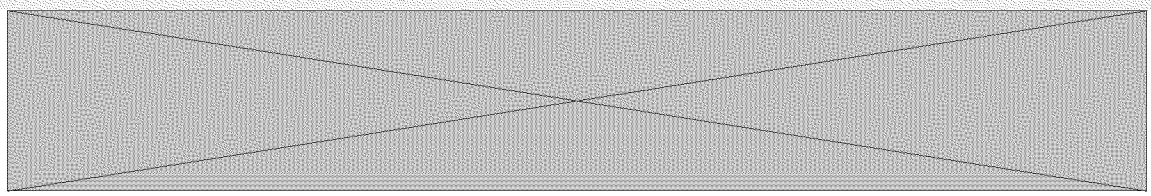
Bill Rodgers

VWGoA EEO

(248) 754-4219

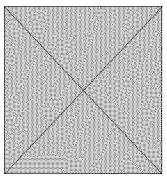
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 7/1/2014 4:06:02 PM
Subject: Green Car Report Daily Headlines

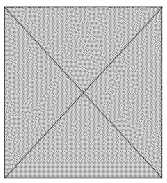
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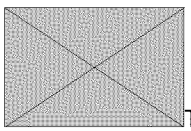
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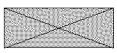
Smaller Tesla Pricing, Electric Car Sales, Euro MPG Ratings: Today's Car News

Jul 01, 2014 03:20 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Tesla Motors says it will keep the price of its smaller electric sedan down, we tally plug-in electric car sales for June, and could new rules make European fuel-economy tests more realistic? All this and more on Green Car Reports. Tesla's smaller electric sedan will have "realistic" pricing to help compete against the...

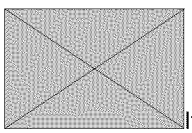
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Plug-In Electric Car Sales In June: Leaf's Best-Ever June, Volt Up On May

Jul 01, 2014 02:00 pm | feedback@highgearmedia.com (Antony Ingram)

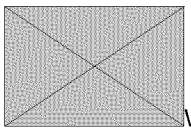
 It hasn't reached the heady heights of May's record-breaking sales tally, but Nissan still has the highest-selling mainstream electric vehicle on the market. Nissan rounds off the month's sales having moved 2,347 Leafs. That's 770 fewer than May's best-ever Leaf sales total, but it's still a record for June, up 5.5 percent on last

year's June...

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Volkswagen XL1 Hybrid Deliveries Begin In UK, And It Ain't Cheap...

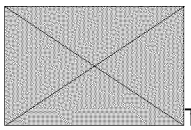
Jul 01, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 We always knew the Volkswagen XL1 wouldn't be cheap. It's a limited-run, carbon-fiber bodied, plug-in hybrid, gull-winged low-slung eco supercar. None of that sounds cheap. And as Volkswagen UK reveals pricing for the light-weight plug-in hybrid, we now know just how not-cheap it actually is: £98,515, or just under $169,000 at current...

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Toyota i-Road Electric City Car Undergoes French Car-Share Trials

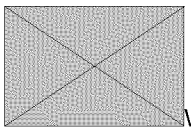
Jul 01, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Toyota might not be convinced by battery electric vehicles but that hasn't stopped the company testing its i-Road urban electric vehicle. Its latest round of testing takes place in Europe, where a fleet of 70 i-Road and Coms personal mobility vehicles are being deployed throughout the French city of Grenoble. The vehicles won't just be driven by...

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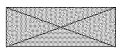
Will European Fuel-Efficiency Tests Get More Realistic Under New Rules?

Jul 01, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 When we report on European market cars, we'll often advise you to take their official fuel consumption ratings with a pinch of salt. The current New European Drive Cycle (NEDC) test simply isn't very real-world relevant, unrealistically inflating a car's economy potential. That may change in the future, though the prospect of a new test is already...

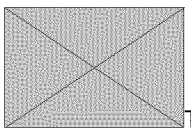
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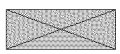
Tesla's Smaller Electric Sedan To Have 'Realistic' Pricing Next To BMW, Audi

Jul 01, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 Tesla might have abandoned its trademark to the 'Model E' name for its planned smaller electric sedan, but the car itself is still very much on Tesla's radar. It's likely to be on buyers' radars too when it makes its expected debut in late 2016, priced to compete with conventional rivals like BMW's 3-Series and Audi's A4. Speaking to Chris...

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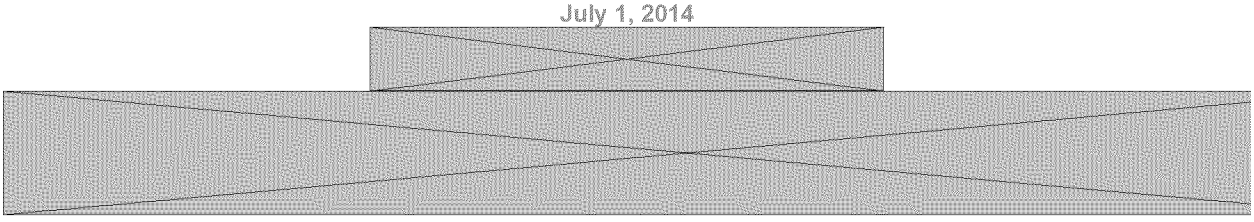
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 7/1/2014 10:33:36 PM
Subject: U.S. SALES REPORT: Strong start to summer raises hopes for even better second half

July 1, 2014



» Get the numbers at Automotive News Data Center

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EDITOR'S NOTE: We are seeking your feedback about our newsletters. Click here to take a short survey

Strong start to summer raises hopes for even better second half

4:53 pm U.S. ET | Jul 1

A flurry of new light-vehicle sales as June ended helped generate the fastest selling rate for the U.S. auto industry in almost eight years, raising hopes for an even more robust second half of 2014. ... » READ

GM sales solid despite recalls, but Chevy falls

12:23 pm U.S. ET | Jul 1

GM remains relatively unscathed in the showroom from its unprecedented recall crisis, as sales rose 1 percent last month to the company's strongest June in seven years. ... » READ

Nissan's newest factory lines boost deliveries

2:37 pm U.S. ET | Jul 1

Nissan Motor Corp.'s recent investments in North American factory capacity translated to robust small-car sales in June. The growing stream of Mexican-made Sentra compacts and Versa subcompacts helped push the brand to record June sales, despite declines in other volume products. ... » READ

2014's stars, duds at halftime

5:29 pm U.S. ET | Jul 1

If it was a new compact or premium crossover or a large or

ON THE BLOGS

JESSE SNYDER

How can 1% growth feel so good?

mid-sized SUV, chances are it lit up the United States sales chart in the first half of the year. If it was a minicar or a mid-sized or large sedan, it probably lost some luster. Light trucks were hot in the first half of 2014, driving up overall new-vehicle sales 4 percent through June. ... » READ

» READ

Toyota advances 3% as cars set pace

4:47 pm U.S. ET | Jul 1

Ford volume slips 6% ahead of key changeovers

1:45 pm U.S. ET | Jul 1

Audi, Porsche propelled by A3's hot start, Macan; VW slump drags on

2:44 pm U.S. ET | Jul 1

Chrysler up 9% on strong Jeep, Ram demand

12:07 pm U.S. ET | Jul 1

BMW holds U.S. luxury segment lead over Mercedes, Lexus

5:24 pm U.S. ET | Jul 1

U.S. sales advance 1% on Chrysler, Nissan, Toyota gains

8:00 am U.S. ET | Jul 1

WINNERS AND LOSERS

% change in sales among brands

	Winners	June	Winners	6 mos.	Losers	June	Losers	6 mos.
1	Maserati	233.10%	Maserati	328.80%	Scion	-27.30%	Mini	-25.40%
2	Tesla	71.00%	Jeep	45.10%	Jaguar	-22.80%	Chrysler Division	-13.90%
3	Jeep	27.80%	Mitsubishi	30.20%	Volkswagen division	-22.00%	Volkswagen division	-13.40%
4	Audi	23.10%	Ram	22.40%	Acura	-18.60%	Scion	-12.50%
5	Buick	18.40%	Lexus	17.10%	Mini	-18.20%	Volvo	-10.00%

Top Selling Light Vehicles

		June		6 mos.
1	Ford F series	60,560	Ford F series	365,82
2	Chevrolet	43,519	Chevrolet	240,67

	Silverado		Silverado	
3	Toyota Camry	40,664	Toyota Camry	222,54
4	Ram	33,149	Ram	203,86
5	Honda Accord	32,329	Honda Accord	185,27
6	Honda Civic	32,301	Nissan Altima	176,45
7	Toyota Corolla/ Matrix	30,945	Toyota Corolla/ Matrix	174,35
8	Ford Fusion	27,604	Honda Civic	167,09
9	Ford Focus	26,266	Ford Fusion	165,49
10	Honda CR-V	26,129	Honda CR-V	154,69

Top Selling Cars

		June		6 mos.
1	Toyota Camry	40,664	Toyota Camry	222,54
2	Honda Accord	32,329	Honda Accord	185,27
3	Honda Civic	32,301	Nissan Altima	176,45
4	Toyota Corolla/ Matrix	30,945	Toyota Corolla/ Matrix	174,35
5	Ford Fusion	27,604	Honda Civic	167,09
6	Ford Focus	26,266	Ford Fusion	165,49
7	Nissan Altima	26,111	Chevrolet Cruze	145,33
8	Chevrolet Cruze	26,008	Ford Focus	120,95
9	Hyundai Sonata	25,195	Hyundai Elantra	112,49
10	Toyota Prius	18,649	Toyota Prius	107,10

Top Selling Light Trucks

		June		6 mos.
1	Ford F series	60,560	Ford F series	365,82
2	Chevrolet Silverado	43,519	Chevrolet Silverado	240,67
3	Ram	33,149	Ram	203,86
4	Honda CR-V	26,129	Honda CR-V	154,69
5	Ford Escape	25,110	Ford Escape	152,89
6	Chevrolet Equinox	21,748	Chevrolet Equinox	120,83

7	Toyota RAV4		Toyota RAV4	
8	Ford Explorer	17,290	Ford Explorer	104,46
9	Jeep Wrangler	16,439	Nissan Rogue	99,302
10	GMC Sierra	15,406	GMC Sierra	93,191

Table sorted by year-to-date sales

	June 2014	June 2013	% change	6 mos. 2014	6 mos. 2013	% change
Buick	21,403	18,078	18%	113,472	100,837	13%
Cadillac	13,941	13,929	0%	82,117	83,679	-2%
Chevrolet	188,567	193,460	-3%	1,027,908	1,015,134	1%
GMC	43,550	39,376	11%	232,371	220,696	5%
General Motors	**267,461**	**264,843**	**1%**	**1,455,868**	**1,420,346**	**3%**
Ford division	214,125	227,448	-6%	1,220,835	1,251,448	-2%
Lincoln	7,271	7,469	-3%	44,522	38,288	16%
Ford Motor Co.	**221,396**	**234,917**	**-6%**	**1,265,357**	**1,289,736**	**-2%**
Lexus	23,518	21,355	10%	138,689	118,415	17%
Scion	4,612	6,340	-27%	30,636	35,000	-13%
Toyota Division	173,584	167,540	4%	996,282	955,376	4%
Toyota/Scion	*178,196*	*173,880*	3%	*1,026,918*	*990,376*	4%
Toyota Motor Sales	**201,714**	**195,235**	**3%**	**1,165,607**	**1,108,791**	**5%**
Chrysler Division	24,026	27,249	-12%	141,068	163,839	-14%
Dodge	50,314	49,843	1%	306,924	318,414	-4%
Ram	35,262	30,935	14%	214,357	175,062	22%
Dodge/Ram	*85,576*	*80,778*	*6%*	*521,281*	*493,476*	*6%*
Fiat	4,478	4,050	11%	24,972	21,612	16%
Jeep	57,006	44,609	28%	332,802	229,405	45%
Chrysler Group* **	**171,086**	**156,686**	**9%**	**1,020,123**	**908,332**	**12%**
Acura	11,206	13,765	-19%	77,951	76,981	1%
Honda Division	117,817	123,150	-4%	661,485	668,597	-1%
American Honda Motor Co.	**129,023**	**136,915**	**-6%**	**739,436**	**745,578**	**-1%**
Infiniti	8,574	9,114	-6%	59,341	52,233	14%
Nissan Division	101,069	95,010	6%	645,136	572,476	13%
Nissan North America	**109,643**	**104,124**	**5%**	**704,477**	**624,709**	**13%**
Hyundai division	67,407	65,007	4%	364,434	361,010	1%
Kia	50,644	50,536	0%	297,413	277,351	7%
Hyundai-Kia	**118,051**	**115,543**	**2%**	**661,847**	**638,361**	**4%**
Audi	16,867	13,706	23%	84,349	74,277	14%
Bentley	216	204	6%	1,308	1,174	11%
Lamborghini*	59	57	4%	354	342	4%
Porsche	4,101	3,700	11%	22,918	21,309	8%
VW division	28,827	36,957	-22%	179,144	206,792	-13%
VW Group Of America	**50,070**	**54,624**	**-8%**	**288,073**	**303,894**	**-5%**
Subaru	**41,367**	**39,235**	**5%**	**238,008**	**204,597**	**16%**
BMW division	30,201	27,074	12%	157,382	140,431	12%
Mini	5,376	6,571	-18%	24,152	32,356	-25%
Rolls-Royce*	75	71	6%	450	426	6%
BMW Group	**35,652**	**33,716**	**6%**	**181,984**	**173,213**	**5%**
Maybach	-	-	-	-	6	-100%
Mercedes-Benz	28,707	26,383	9%	163,107	151,441	8%

Smart USA						
Daimler AG	29,380	27,164	8%	167,754	155,906	8%
Mazda	26,208	22,497	17%	156,431	144,943	8%
Mitsubishi	6,021	5,297	14%	39,672	30,469	30%
Jaguar	1,263	1,637	-23%	8,317	7,798	7%
Land Rover	4,038	3,468	16%	26,186	22,984	14%
Jaguar Land Rover N.A.	5,301	5,105	4%	34,503	30,782	12%
Volvo Cars N.A.	5,983	6,678	-10%	29,330	32,578	-10%
Tesla*	2,350	1,374	71%	13,230	11,872	11%
Maserati	966	290	233%	5,442	1,269	329%
Suzuki	-	-		-	5,946	-100%
Other**	291	284	3%	1,746	1,704	3%
U.S. LIGHT VEHICLE	1,421,963	1,404,527	1%	8,168,888	7,833,026	4%

*Estimate
**Includes estimates for Aston Martin, Ferrari and Lotus
***Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.

Highlights

Mfgr. highest volume - June	GM	267,461	Mfgr. highest volume - 6 mos.	GM	1,455,868
Mfgr. gained the most volume - June	Chrysler Group	14,400	Mfgr. gained the most volume - 6 mos.	Chrysler Group	111,791
Mfgr. lost the most volume - June	Ford Motor Co.	(13,521)	Mfgr. lost the most volume - 6 mos.	Ford Motor Co.	(24,379)
Mfgr. highest % increase - June	Maserati	233%	Mfgr. highest % increase - 6 mos.	Maserati	329%
Mfgr. biggest % drop - June	Volvo	-10%	Mfgr. biggest % drop - 6 mos.	Volvo	-10%
Brand highest volume - June	Ford	214,125	Brand highest volume - 6 mos.	Ford	1,220,835
Brand gained the most volume - June	Jeep	12,397	Brand gained the most volume - 6 mos.	Jeep	103,397
Brand lost the most volume - June	Ford	(13,323)	Brand lost the most volume - 6 mos.	Ford	(30,613)
Brand highest % increase - June	Maserati	233%	Brand highest % increase - 6 mos.	Maserati	329%
Brand biggest % drop - June	Scion	-27%	Brand biggest % drop - 6 mos.	Mini	-25%

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To: Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Wed 7/2/2014 12:40:03 PM
Subject: VW361 50070 15
VW361 50070 15_7-1-14.pdf

Please find enclosed the Laboratory Test Data for the Subject vehicle. If you have any questions or concerns, please contact me.

Thank You,

Vincent Mazaitis

(734)214-4864

To: Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Wed 7/2/2014 5:52:08 PM
Subject: VW361-0-0250
VW361-0-0250_7-2-14.pdf

Please find enclosed the Laboratory Test Data for the Subject vehicle. If you have any questions or concerns, please contact me.

Thank You,

Vincent Mazaitis

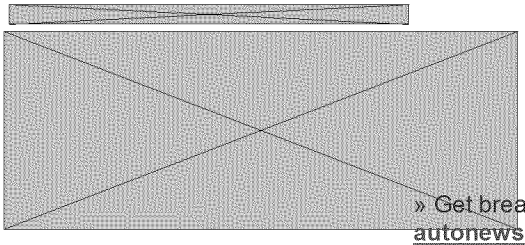
(734)214-4864

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 7/2/2014 8:41:49 PM
Subject: DAILY: Chrysler faces NHTSA query on delayed Jeep fix | Henry Nolte, lawyer for 3 Ford CEOs, dies at 90 | GM gets retail lift from wave of recalls | Stuart quits as Volkswagen Credit CEO

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July 2, 2014



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TOP NEWS

Chrysler faces NHTSA query on delayed Jeep fix

1:48 pm U.S. ET | Jul 2

Chrysler Group has been placed back in the recall hotseat with federal safety regulators for allegedly dragging its feet in efforts to improve the rear crashworthiness of older-model Jeep Grand Cherokees and Libertys. ... » READ

Henry Nolte Jr., former chief counsel to 3 Ford CEOs, dies at 90

UPDATED: 7/2/14 3:23 pm ET - adds photo

2:50 pm U.S. ET | Jul 2

Henry Nolte, the chief in-house legal counsel to three Ford CEOs from 1974 to 1989, died Monday in suburban Detroit. He was 90. ... » READ

GM, defying odds, gets retail lift from wave of recalls

UPDATED: 7/2/14 4:28 pm ET - adds closing share price
12:01 am U.S. ET | Jul 2

In an unusual twist, an influx of owners of older models recalled this year by GM is stimulating the company's new-vehicle business, dealers and analysts say. ...
» READ

Stuart quits as Volkswagen Credit CEO

2:51 pm U.S. ET | Jul 2

Volkswagen said today that Andrew Stuart, the CEO of captive finance arm Volkswagen Credit, is leaving the company. ... » READ

Subaru names Jeff Walters to replace retiring U.S. sales head Cyphers

UPDATED: 7/2/14 11:01 am ET - adds photos
9:00 am U.S. ET | Jul 2

Bill Cyphers, a 30-year veteran of Subaru of America and one of the key executives who helped the brand's sales skyrocket, is retiring as its senior vice president of sales. The company appointed Jeffrey Walters to the position, effective July 1. ... » READ

BEST PRACTICES

High-end Hyundai buyers enjoy private lounge, dinners and more

12:01 am U.S. ET | Jun 30

The lounge inside Burns Hyundai in Marlton, N.J., offers red-carpet perks to Genesis and Equus buyers. It has been essential to winning over customers from brands such as Lexus, BMW and Mercedes-Benz. ... » READ

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JIM HENRY

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GM ignition issues trigger another massive recall

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GM halts sale of some 2013-14 Chevy Cruze models for airbag glitch

Older, wiser and well-connected, Bill Ford gets ready for a new chapter

GM judge says concealing switch fault would have been fraud

UPDATED: 7/2/14 2:34 pm ET - new story

11:56 am U.S. ET | Jul 2

Senate's second GM hearing set for July 17

2:20 pm U.S. ET | Jul 2

GM says one worker killed, four hospitalized in metal plant explosion

UPDATED: 7/1/14 10:15 pm ET - new story

4:58 pm U.S. ET | Jul 1

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» Oct. 15 - Best Dealerships To Work For

» Nov. 21 - Automobilwoche Kongress

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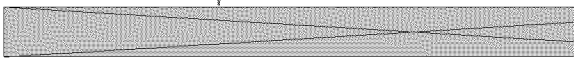
» July 30 - Marketing Market Price

by MAX Digital

UPCOMING

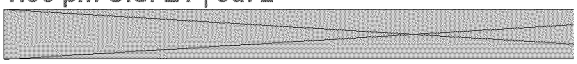
Ford's Fields starts new job with 9% raise in annual salary

10:14 am U.S. ET | Jul 2



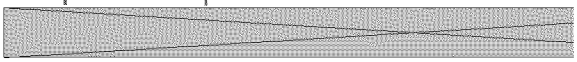
AutoNation says new-car sales up 1% in June

1:36 pm U.S. ET | Jul 2



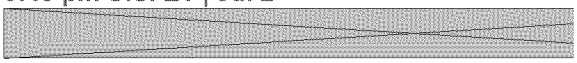
2014's stars, laggards at halfway mark

5:29 pm U.S. ET | Jul 1



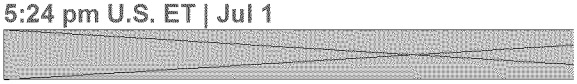
Ford tops Fiat Chrysler in Canadian auto sales in June

3:49 pm U.S. ET | Jul 2



BMW holds U.S. luxury segment lead over Mercedes, Lexus

5:24 pm U.S. ET | Jul 1



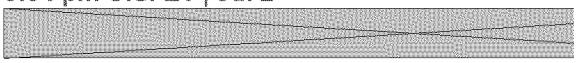
GM Korea contractor probed by prosecutors for possible leak of engine technology

7:05 am U.S. ET | Jul 2



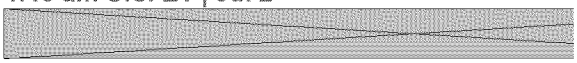
Twin Cities Automotive renamed Carousel Motor Group

3:54 pm U.S. ET | Jul 2



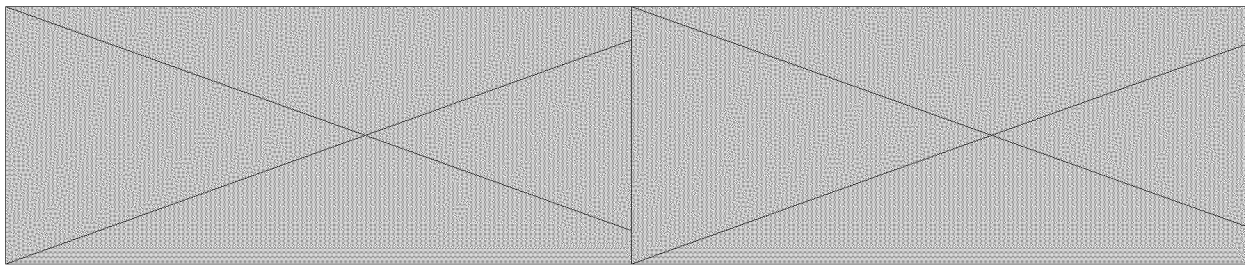
VW takes Passat upscale to escape mid-market struggles in Europe

4:45 am U.S. ET | Jul 2



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. .

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7
Ex. 7
Ex. 7 @vw.com]
From: Ex. 7
Sent: Thur 7/3/2014 2:12:07 PM
Subject: VW Group - Golf 2.0L TDI Manual Supplemental Information

Hello Jim,

Today we sent the supplemental information for the Ex. 7 diesel with Ex. 7 was selected for FTP / Hwy confirmatory testing.

Please note that due to logistical issues, the earliest availability date for this vehicle has changed to **July 28th**. We are letting you know since we are unable to correct the original date sent in the decision information data set.

Please advise with the actual test date when it is set.

Regards

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

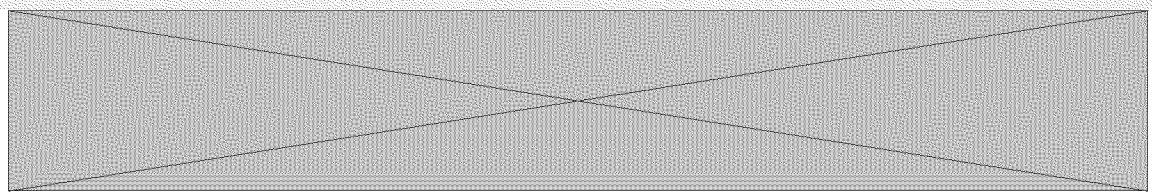
Fax:

mailto:

Ex. 7

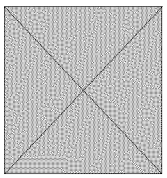
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Thur 7/3/2014 4:06:15 PM
Subject: Green Car Report Daily Headlines

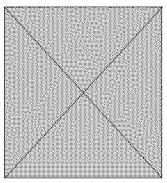
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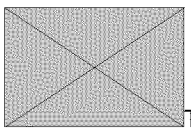
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Tesla PA Sales, 2015 BMW i8 Pricing, Audi Plug-In Hybrids: Today's Car News

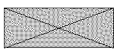
Jul 03, 2014 03:20 pm | feedback@highgearmedia.com (Stephen Edelstein)



Today on Green Car Reports: Tesla Motors gains ground in Pennsylvania, full pricing and options information for the 2015 BMW i8 plug-in hybrid, and Audi plans a plug-in hybrid version of each major model. All this and more on Green Car Reports. We've updated our June plug-in electric car sales report with additional figures. Beijing plans 1,000 DC...

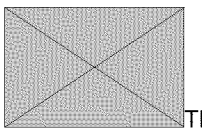
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Hyundai Sonata Hybrid Carries Over, Eco Gets 32 MPG--But Where's That Plug-In?

Jul 03, 2014 03:38 pm | feedback@highgearmedia.com (Marty Padgett)



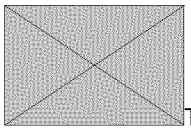
The 2015 Hyundai Sonata is nearly entirely new--save for the steadily improving Hybrid edition. Hyundai says the Sonata Hybrid will stick with its existing gas-electric drivetrain and body style through the 2015 model year, while the rest of the range takes on a more

subdued look and more refined powertrains for the new model year. The new Sonata...

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Tesla Gains Some Ground On Retail Sales In Pennsylvania

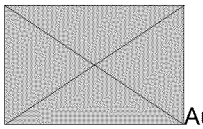
Jul 03, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 Tesla's long battle against state franchise laws is still underway, but every so often it does get a boost of positive news. That latest boost comes from Pennsylvania, where the state's House of Representatives has passed legislation allowing Tesla Motors [NSDQ:TSLA] to sell through its first-party retail store model. Advocates of Tesla will be...

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Audi Plans Plug-In Hybrid Version Of Every Major Model By 2020

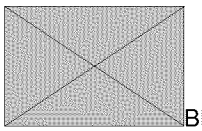
Jul 03, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 Audi will concentrate heavily on the development of plug-in hybrids over the next few years, as the company plans to offer a plug-in model of very significant model in its lineup by 2020. Speaking to Autocar, Audi's research and development chief Ulrich Hackenberg says plug-in hybrids will be prioritized over other plug-ins, as they best meet...

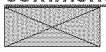
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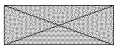
BMW i8 Plug-In Hybrid Sports Car: Full Pricing And Options Announced

Jul 03, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 BMW has revealed full pricing and options details for its plug-in hybrid sports car, the i8. It's the first glimpse we've had of pricing beyond the i8's regular base price, and what BMW's 'World' trim levels offer beyond the standard i8's equipment tally. Revealed by BMW Blog, the i8's base price comes in at $135,700, before BMW's $950 destination...

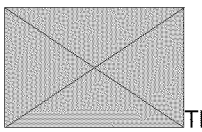
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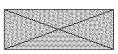
Beijing Angles For More EVs: 1,000 Fast Chargers, Wiring Mandate For Buildings

Jul 03, 2014 11:00 am | feedback@highgearmedia.com (Stephen Edelstein)

 The Chinese government is working hard to encourage the mass adoption of electric cars, but those cars will never catch on if there's no place to charge them. The city government in Beijing hopes to address that problem with a new mandate that will massively expand the charging infrastructure in the Chinese capital. Under the plan, new residential...

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To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Giles, Michael (EEO)
Sent: Thur 7/3/2014 4:36:51 PM
Subject: VW Preliminary data

Hello Vince or Jim,

As a follow up to an earlier request from Bill: if there is any chance to get early results for the Jetta diesel , please forward them to me.

I know Bill requested the same information earlier but he is gone this afternoon.

Thanks,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

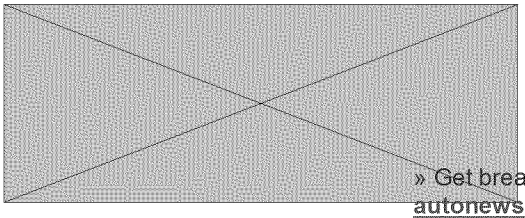
mailto: Michael.Giles@VW.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 7/3/2014 8:40:27 PM
Subject: DAILY: Subaru recalls 660,000 vehicles in 20 states | BMW's $1 billion move into Mexico | No happy endings for GM crash victims' families | Fiat Chrysler preps for NYSE

Today's most read story

GM, defying odds, gets retail lift from wave of recalls

July 3, 2014



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TOP NEWS

Subaru recalls 660,000 vehicles for potential road salt brake-line corrosion

10:46 am U.S. ET | Jul 3

Subaru of America is recalling more than 660,000 vehicles in 20 "salt belt" states and the District of Columbia for potential brake-line corrosion that can occur when salt water enters through a gap in the fuel tank protector, the company said today. ... » READ

BMW to invest $1 billion in new plant in Mexico, employ 1,500 workers

UPDATED: 7/3/14 4:06 pm ET - adds details, photo
1:40 pm U.S. ET | Jul 3

BMW plans to spend $1 billion to build a plant in San Luis Potosi, Mexico, with capacity of about 150,000 units per year, the company said today. Start of

production is planned for 2019, with a work force of about 1,500 employees, said Harald Krueger, BMW board member for production, in a statement. ...
» READ

Fiat Chrysler Automobiles files to list shares on NYSE

UPDATED: 7/3/14 11:24 am ET - adds SEC filing
6:40 am U.S. ET | Jul 3
Fiat Chrysler Automobiles this morning filed registration documents with the Securities and Exchange Commission to become a publicly traded company with its stock listed on the New York Stock Exchange. ... » READ

Fiat narrows Q1 loss by 46% after Chrysler-related accounting change

1:23 pm U.S. ET | Jul 3
Fiat has revised its first quarter net loss to 173 million euros ($236 million) from a previously announced loss of 319 million euros based on accounting changes related to its buyout of Chrysler. ... » READ

Alliance drops suit over Florida warranty reimbursement law

5:40 pm U.S. ET | Jul 2
The Alliance of Automobile Manufacturers asked a federal court to dismiss its six-year-old lawsuit over Florida legislation on warranty reimbursement. ...
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Next-gen Prius launch delayed 6 months

GM victims contacting Feinberg a month before program start

7:14 am U.S. ET | Jul 3

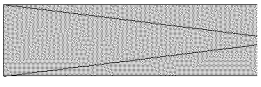
Tesla measure allowing 5 stores heads to Pa. governor's desk

4:20 pm U.S. ET | Jul 3

Galpin Motors names Beau Boeckmann president, COO

2:15 pm U.S. ET | Jul 3

Daimler tests self-driving truck, sets goal of production



UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

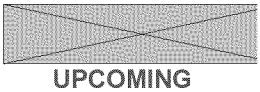
» Nov. 21 - Automobilwoche Kongress



UPCOMING WEBINARS

» July 30 - Marketing Market Price

by MAX Digital

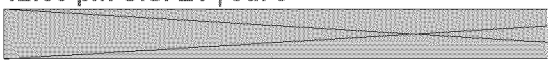


UPCOMING WEBINARS

» July 16 - Plugging

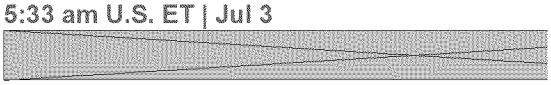
by 2025

12:50 pm U.S. ET | Jul 3



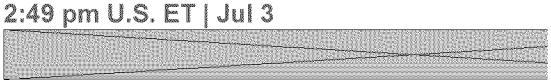
VW denies rumors of planned takeover bid for U.S. truckmaker Paccar

5:33 am U.S. ET | Jul 3

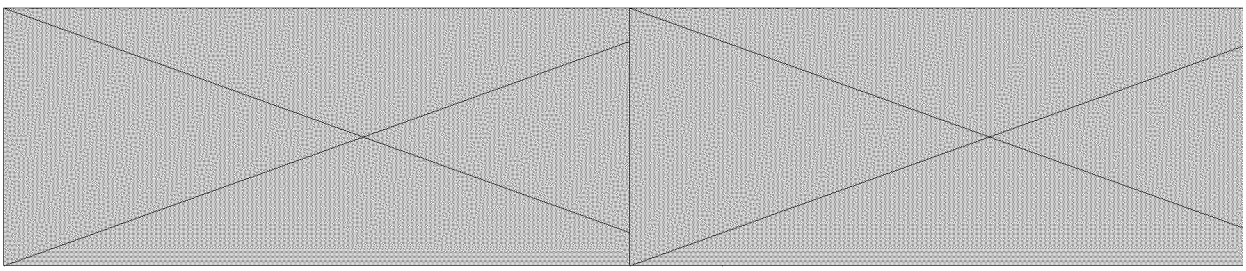


Infiniti hires Porsche official as first corporate communications director

2:49 pm U.S. ET | Jul 3



the Leaks in F&I: How to Deal with Inefficiencies that Put Profits at Risk



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To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: oliver.schmidt@vw.com[oliver.schmidt@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Thur 7/3/2014 9:04:27 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-7-1-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Attached are the data in Verify as of July 1, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on July 9, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2015 Volkswage	Audi	A3	VGA	7	1.8	4
		2015 Volkswage	Audi	A3 Cabriol	VGA	6	1.8	4
		2015 Volkswage	Audi	A3 Cabriol	VGA	5	2.0	4
		2015 Volkswage	Audi	A3 quattro	VGA	4	2.0	4
		2015 Volkswage	Audi	A4	VGA	46	2.0	4
		2015 Volkswage	Audi	A4 quattro	VGA	64	2.0	4
		2015 Volkswage	Audi	A4 quattro	VGA	49	2.0	4
		2015 Volkswage	Audi	A5 Cabriol	VGA	66	2.0	4
		2015 Volkswage	Audi	A5 quattro	VGA	65	2.0	4
		2015 Volkswage	Audi	A5 quattro	VGA	50	2.0	4
		2015 Volkswage	Audi	A6	VGA	47	2.0	4
		2015 Volkswage	Audi	A6 quattro	VGA	48	2.0	4
		2015 Volkswage	Audi	A6 quattro	VGA	72	3.0	6
Diesel;		2015 Volkswage	Audi	A6 quattro	VGA	17	3.0	6
		2015 Volkswage	Audi	A7 quattro	VGA	71	3.0	6
Diesel;		2015 Volkswage	Audi	A7 quattro	VGA	18	3.0	6
		2015 Volkswage	Audi	A8	VGA	40	3.0	6
		2015 Volkswage	Audi	A8	VGA	11	4.0	8
Diesel;		2015 Volkswage	Audi	A8L	VGA	15	3.0	6
		2015 Volkswage	Audi	A8L	VGA	41	3.0	6
		2015 Volkswage	Audi	A8L	VGA	10	4.0	8
		2015 Volkswage	Audi	A8L	VGA	14	6.3	12
		2015 Volkswage	Audi	allroad qu	VGA	68	2.0	4
		2015 Volkswage	Audi	Q3	VGA	62	2.0	4
		2015 Volkswage	Audi	Q3 quattro	VGA	37	2.0	4
		2015 Volkswage	Audi	Q5	VGA	67	2.0	4
		2015 Volkswage	Audi	Q5	VGA	70	3.0	6
Diesel;		2015 Volkswage	Audi	Q5	VGA	16	3.0	6
Hybrid;		2015 Volkswage	Audi	Q5 Hybrid	VGA	63	2.0	4
Diesel;		2015 Volkswage	Audi	Q7	VGA	12	3.0	6
		2015 Volkswage	Audi	Q7	VGA	51	3.0	6
		2015 Volkswage	Audi	R8	VGA	27	4.2	8
		2015 Volkswage	Audi	R8	VGA	29	4.2	8
		2015 Volkswage	Audi	R8	VGA	35	5.2	10
		2015 Volkswage	Audi	R8	VGA	33	5.2	10
		2015 Volkswage	Audi	R8 Spyder	VGA	26	4.2	8
		2015 Volkswage	Audi	R8 Spyder	VGA	28	4.2	8
		2015 Volkswage	Audi	R8 Spyder	VGA	34	5.2	10
		2015 Volkswage	Audi	R8 Spyder	VGA	32	5.2	10
		2015 Volkswage	Audi	RS5	VGA	30	4.2	8
		2015 Volkswage	Audi	RS5 Cabrio	VGA	31	4.2	8
		2015 Volkswage	Audi	RS7	VGA	21	4.0	8
		2015 Volkswage	Audi	S3	VGA	42	2.0	4
		2015 Volkswage	Audi	S4	VGA	73	3.0	6

	2015	Volkswage	Audi	S4	VGA	76	3.0	6
	2015	Volkswage	Audi	S5	VGA	74	3.0	6
	2015	Volkswage	Audi	S5	VGA	77	3.0	6
	2015	Volkswage	Audi	S5 Cabriole	VGA	75	3.0	6
	2015	Volkswage	Audi	S6	VGA	20	4.0	8
	2015	Volkswage	Audi	S7	VGA	19	4.0	8
	2015	Volkswage	Audi	S8	VGA	9	4.0	8
	2015	Volkswage	Audi	SQ5	VGA	69	3.0	6
	2015	Volkswage	Audi	TT Coupe c	VGA	2	2.0	4
	2015	Volkswage	Audi	TT Roadste	VGA	3	2.0	4
	2015	Volkswage	Bentley	Continenta	VGA	24	4.0	8
	2015	Volkswage	Bentley	Continenta	VGA	43	6.0	12
	2015	Volkswage	Bentley	Continenta	VGA	22	4.0	8
	2015	Volkswage	Bentley	Continenta	VGA	45	6.0	12
	2015	Volkswage	Bentley	Flying Spur	VGA	23	4.0	8
	2015	Volkswage	Bentley	Flying Spur	VGA	44	6.0	12
	2015	Volkswage	Bentley	Mulsanne	VGA	61	6.8	8
	2015	Volkswage	Bugatti	Veyron	VGA	60	8.0	16
	2015	Volkswage	Lamborghi	Aventador	VGA	52	6.5	12
	2015	Volkswage	Lamborghi	Aventador	VGA	54	6.5	12
	2015	Volkswage	Lamborghi	Aventador	VGA	53	6.5	12
	2015	Volkswage	Lamborghi	Huracan	VGA	25	5.2	10
	2015	Volkswage	Volkswage	Beetle	VGA	79	1.8	4
	2015	Volkswage	Volkswage	Beetle	VGA	78	1.8	4
	2015	Volkswage	Volkswage	Beetle	VGA	81	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle	VGA	95	2.0	4
	2015	Volkswage	Volkswage	Beetle	VGA	83	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle	VGA	91	2.0	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	80	1.8	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	82	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle Con	VGA	96	2.0	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	84	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle Con	VGA	92	2.0	4
	2015	Volkswage	Volkswage	CC	VGA	58	2.0	4
	2015	Volkswage	Volkswage	CC	VGA	59	2.0	4
	2015	Volkswage	Volkswage	CC 4Motio	VGA	56	3.6	6
	2015	Volkswage	Volkswage	Eos	VGA	36	2.0	4
	2015	Volkswage	Volkswage	Golf	VGA	85	1.8	4
	2015	Volkswage	Volkswage	GTI	VGA	1	2.0	4
	2015	Volkswage	Volkswage	GTI	VGA	8	2.0	4
Error in FirY	2015	Volkswage	Volkswage	Jetta	VGA	97	1.8	4
	2015	Volkswage	Volkswage	Jetta	VGA	93	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	86	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	94	2.0	4
	2015	Volkswage	Volkswage	Passat	VGA	90	1.8	4

	2015	Volkswage	Volkswage	Passat	VGA	88	1.8	4
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	89	2.0	4
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	87	2.0	4
	2015	Volkswage	Volkswage	Passat	VGA	55	3.6	6
	2015	Volkswage	Volkswage	Tiguan	VGA	39	2.0	4
	2015	Volkswage	Volkswage	Tiguan 4M	VGA	38	2.0	4
Diesel;	2015	Volkswage	Volkswage	Touareg	VGA	13	3.0	6
	2015	Volkswage	Volkswage	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.6000	39.4000	31.1546
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S	14	23	17				16.4549	29.7195	20.5904
Manual(M	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S	13	22	16				15.4000	28.8067	19.4796
Manual(M	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S	14	23	17				16.4549	29.7195	20.5904
Manual(M	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S	13	22	16				15.4000	28.8067	19.4796
Manual(M	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S	18	28	21				22.4000	35.8000	26.9372

Manual(M	17	26	20	20.0000	33.4000	24.4063
Auto(AM-S	18	28	21	22.4000	35.8000	26.9372
Manual(M	17	26	20	20.0000	33.4000	24.4063
Auto(AM-S	18	26	21	22.1000	34.7000	26.4165
Auto(AM-S	17	27	20	20.7366	35.2072	25.4423
Auto(AM-S	17	27	20	20.7366	35.2072	25.4423
Auto(S8)	17	27	20	19.9000	36.4000	24.9995
Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(AM-S	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	14	20	16	16.8000	25.5000	19.8471
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S	31	41	34	40.2000	57.8000	46.5830
Manual(M	23	31	26	27.7589	43.4112	33.1352
Manual(M	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S	30	40	34	39.7000	56.5000	45.8327
Manual(M	23	31	26	27.7589	43.4112	33.1352
Manual(M	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S	22	31	25	26.9290	42.1849	32.1632
Manual(M	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S	22	30	25	27.5000	41.5000	32.4219
Manual(M	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S	25	33	28	30.7000	45.3000	35.9078
Manual(M	25	34	28	30.0000	46.4000	35.6740
Manual(M	25	37	29	32.3787	52.4750	38.1218
Auto(AM-S	24	32	27	29.5595	44.4600	34.8093
Manual(M	25	34	28	29.3000	49.6000	35.9145
Manual(M	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995

mbined (unrounded) unadjusted CO2 value is more than .1 gpm different from our calculation of 2258. Please revis

Manual(M	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S	30	42	34	39.1000	60.2000	46.4219
Manual(M	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbochar	AMS	Automatec		6
24.3444	34.5845	28.0867		TC	Turbochar	AMS	Automatec		6
23.3120	31.5429	26.4136		TC	Turbochar	AMS	Automatec		6
24.0818	32.6198	27.2970		TC	Turbochar	AMS	Automatec		6
23.6858	31.6788	26.7189		TC	Turbochar	SCV	Selectable		8
21.5783	30.5883	24.8755		TC	Turbochar	SA	Semi-Auto		8
22.1972	32.0693	25.7665		TC	Turbochar	M	Manual		6
19.8843	28.2637	22.9455		TC	Turbochar	SA	Semi-Auto		8
21.5783	30.5883	24.8755		TC	Turbochar	SA	Semi-Auto		8
22.1972	32.0693	25.7665		TC	Turbochar	M	Manual		6
24.5044	32.5529	27.5721		TC	Turbochar	SCV	Selectable		8
19.6106	28.8603	22.9156		TC	Turbochar	SA	Semi-Auto		8
18.3949	27.2332	21.5408		SC	Supercha	SA	Semi-Auto		8
24.4094	38.0485	29.1042		TC	Turbochar	SA	Semi-Auto		8
18.0028	27.5267	21.3226		SC	Supercha	SA	Semi-Auto		8
24.4094	38.0485	29.1042		TC	Turbochar	SA	Semi-Auto		8
18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Auto		8
18.2315	29.5343	22.0244		TC	Turbochar	SA	Semi-Auto		8
23.8727	36.3252	28.2271		TC	Turbochar	SA	Semi-Auto		8
18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Auto		8
17.9485	28.5015	21.5369		TC	Turbochar	SA	Semi-Auto		8
13.8358	21.9706	16.6020	G	NA	Naturally A	SA	Semi-Auto		8
20.9913	28.1265	23.6964		TC	Turbochar	SA	Semi-Auto		8
19.6619	28.5380	22.8617		TC	Turbochar	SA	Semi-Auto		6
19.7028	28.0105	22.7375		TC	Turbochar	SA	Semi-Auto		6
19.6619	27.5771	22.5781		TC	Turbochar	SA	Semi-Auto		8
17.8443	25.5746	20.6536		SC	Supercha	SA	Semi-Auto		8
23.6266	31.3636	26.5783		TC	Turbochar	SA	Semi-Auto		8
24.0075	29.7936	26.3065		TC	Turbochar	SA	Semi-Auto		8
18.7400	27.6200	21.9099		TC	Turbochar	SA	Semi-Auto		8
15.5983	21.6157	17.8322		SC	Supercha	SA	Semi-Auto		8
13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec		7
11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual		6
12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec		7
11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual		6
13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec		7
11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual		6
12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec		7
11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual		6
15.7409	23.3075	18.4339		NA	Naturally A	AMS	Automatec		7
15.8793	22.1836	18.2078		NA	Naturally A	AMS	Automatec		7
15.5443	26.5587	19.1108		TC	Turbochar	SA	Semi-Auto		8
23.1833	30.7065	26.0560		TC	Turbochar	AMS	Automatec		6
18.1170	27.5580	21.4190		SC	Supercha	AMS	Automatec		7

17.0438	26.0230	20.1767	SC	Supercharg	M	Manual	6
18.1170	27.5580	21.4190	SC	Supercharg	AMS	Automatec	7
17.0438	26.0230	20.1767	SC	Supercharg	M	Manual	6
17.6699	25.9530	20.6333	SC	Supercharg	AMS	Automatec	7
16.7533	26.9042	20.1794	TC	Turbochar	AMS	Automatec	7
16.7533	26.9042	20.1794	TC	Turbochar	AMS	Automatec	7
16.5369	26.7008	19.9551	TC	Turbochar	SA	Semi-Auto	8
16.7285	23.6581	19.2682	SC	Supercharg	SA	Semi-Auto	8
22.3665	31.1759	25.6242	TC	Turbochar	AMS	Automatec	6
22.3665	31.1759	25.6242	TC	Turbochar	AMS	Automatec	6
15.2087	25.3816	18.5553	TC	Turbochar	SA	Semi-Auto	8
12.4737	21.0866	15.2827 G	TC	Turbochar	SA	Semi-Auto	8
13.8190	23.8488	17.0447 G	TC	Turbochar	SA	Semi-Auto	8
12.0228	20.0478	14.6643 G	TC	Turbochar	SA	Semi-Auto	8
13.8190	23.8488	17.0447 G	TC	Turbochar	SA	Semi-Auto	8
12.0228	20.0478	14.6643 G	TC	Turbochar	SA	Semi-Auto	8
10.5402	17.7129	12.8889 G	TC	Turbochar	SA	Semi-Auto	8
8.4232	14.7698	10.4424 G	TC	Turbochar	AMS	Automatec	7
10.6055	18.4729	13.1199 G	NA	Naturally A	AMS	Automatec	7
10.6353	16.9743	12.7836 G	NA	Naturally A	AMS	Automatec	7
9.7957	16.2453	11.9264 G	NA	Naturally A	AMS	Automatec	7
14.0224	20.0427	16.2140 G	NA	Naturally A	AMS	Automatec	7
24.7637	32.6943	27.7980	TC	Turbochar	SA	Semi-Auto	6
23.7579	32.6943	27.0899	TC	Turbochar	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbochar	AMS	Automatec	6
30.6516	40.5292	34.4273	TC	Turbochar	AMS	Automatec	6
22.6980	30.6082	25.6850	TC	Turbochar	M	Manual	6
30.5143	40.5292	34.3319	TC	Turbochar	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbochar	SA	Semi-Auto	6
22.7135	28.5529	25.0157	TC	Turbochar	AMS	Automatec	6
30.3081	39.6674	33.9083	TC	Turbochar	AMS	Automatec	6
22.6980	30.6082	25.6850	TC	Turbochar	M	Manual	6
29.6183	40.1317	33.5766	TC	Turbochar	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbochar	AMS	Automatec	6
20.6665	31.8238	24.5378	TC	Turbochar	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally A	SA	Semi-Auto	6
21.7634	30.1121	24.8658	TC	Turbochar	AMS	Automatec	6
25.3353	37.0021	29.5244	TC	Turbochar	M	Manual	5
24.6434	32.6158	27.6891	TC	Turbochar	AMS	Automatec	6
24.9095	34.2917	28.4070	TC	Turbochar	M	Manual	6
e Verify as needed							
25.1926	37.0021	29.4176	TC	Turbochar	M	Manual	5
23.5744	31.8670	26.7012	TC	Turbochar	AMS	Automatec	6
24.6629	33.9684	28.1307	NA	Naturally A	M	Manual	5
22.8950	32.6159	26.4413	TC	Turbochar	M	Manual	6
24.3335	35.7288	28.4112	TC	Turbochar	SA	Semi-Auto	6

24.1899	35.2585	28.1693	TC	Turbochar¡M	Manual	5
29.8946	42.1145	34.3842	TC	Turbochar¡AMS	Automate	6
29.8256	43.5614	34.7575	TC	Turbochar¡M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally ⁄AMS	Automate	6
20.5496	25.7855	22.6161	TC	Turbochar¡SA	Semi-Auto	6
20.3807	25.8019	22.5089	TC	Turbochar¡SA	Semi-Auto	6
19.6490	28.9961	22.9829	TC	Turbochar¡SA	Semi-Auto	8
17.0411	22.7325	19.2048	NA	Naturally ⁄SA	Semi-Auto	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
MT with pad	dles)	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		422	GP	Gasoline (F
N	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		389	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		422	GP	Gasoline (F
N	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
MT with pad	dles)	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAV03.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV04.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAV03.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV04.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV06.3	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		406	GP	Gasoline (F
Y	N	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		455	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0NU4			5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAT02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAT03.0NU3			5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAT03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV04.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F

N	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
N	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV04.(	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV02.(	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV02.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	R	2-Wheel DFVGAV06.8	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV08.(	15		GPR	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV06.5	15		GPR	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV06.5	15		GPR	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV06.5	15		GPR	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IFVGAV05.2	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
tomated Ma	nual with	paddles)	2-Wheel DFVGAJ02.0	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV03.(	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	10		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F

N	N	F	2-Wheel D	FVGAV02.(	15	G	Gasoline (F
Y	N	Automated Manual with paddles)	2-Wheel D	FVGAV02.0VAL	20	DU	Diesel, ultr
N	N	F	2-Wheel D	FVGAV02.0VAL	20	DU	Diesel, ultr
Y	N	Automated Manual with paddles)	2-Wheel D	FVGAV03.(	15	GP	Gasoline (F
Y	N	F	2-Wheel D	FVGAJ02.0	10	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	15	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAT03.0NU2	5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAT03.(	15	GP	Gasoline (F

Fuel Unit	Fuel Type	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	Unleaded Recommended)	Not exempt				86	12		
MPG	Unleaded Recommended)	Not exempt	79	10					
MPG	Unleaded Recommended)	Not exempt	79	10					
MPG	Unleaded Recommended)	Not exempt				86	10		
MPG	Unleaded Recommended)	Not exempt				91	12		
MPG	Unleaded Recommended)	Not exempt				91	12		
MPG	Unleaded Recommended)	Not exempt				91	12		
MPG	Unleaded Recommended)	Not exempt	81	10					
MPG	Unleaded Recommended)	Not exempt	84	12					
MPG	Unleaded Recommended)	Not exempt	84	12					
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt				98	16		
MPG	ulfur (15 ppm maximum)	Not exempt				98	16		
MPG	Unleaded Recommended)	Not exempt						94	25
MPG	ulfur (15 ppm maximum)	Not exempt						94	25
MPG	Unleaded Recommended)	Not exempt				100	15		
MPG	Unleaded Recommended)	Not exempt				100	15		
MPG	ulfur (15 ppm maximum)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				107	15		
MPG	Unleaded Recommended)	Not exempt				90	28		
MPG	Unleaded Recommended)	Not exempt						84	17
MPG	Unleaded Recommended)	Not exempt						84	17
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	ulfur (15 ppm maximum)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	ulfur (15 ppm maximum)	Truck							
MPG	Unleaded Recommended)	Truck							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt							
MPG	Unleaded Recommended)	Not exempt	84	13					
MPG	Unleaded Recommended)	Not exempt	81	10					
MPG	Unleaded Recommended)	Not exempt						94	25
MPG	Unleaded Recommended)	Not exempt				86	10		
MPG	Unleaded Recommended)	Not exempt				90	13		

Unleaded Recommended)								
MPG	miles per gal	Not exempt			90	13		
Unleaded Recommended)								
MPG	miles per gal	Not exempt	84	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	84	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	81	10				
Unleaded Recommended)								
MPG	miles per gal	Not exempt			98	16		
Unleaded Recommended)								
MPG	miles per gal	Not exempt					94	25
Unleaded Recommended)								
MPG	miles per gal	Not exempt			100	15		
Unleaded Recommended)								
MPG	miles per gal	Truck						
Unleaded Recommended)								
MPG	miles per gal	Not exempt	74	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt						
Unleaded Recommended)								
MPG	miles per gal	Not exempt	89	11				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	89	11				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	86	7				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	86	7				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	102	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	102	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt			101	11		
Unleaded Required)								
MPG	miles per gal	Not exempt						
Unleaded Required)								
MPG	miles per gal	Not exempt						
Unleaded Required)								
MPG	miles per gal	Not exempt						
Unleaded Required)								
MPG	miles per gal	Not exempt						
Unleaded Recommended)								
MPG	miles per gal	Not exempt						
Unleaded Recommended)								
MPG	miles per gal	Not exempt					85	15
Unleaded Recommended)								
MPG	miles per gal	Not exempt					85	15
Unleaded Recommended)								
MPG	miles per gal	Not exempt					85	15
ulfur (15 ppm maximum)								
MPG	miles per gal	Not exempt					85	15
Unleaded Recommended)								
MPG	miles per gal	Not exempt					85	15
ulfur (15 ppm maximum)								
MPG	miles per gal	Not exempt					85	15
Unleaded Recommended)								
MPG	miles per gal	Not exempt	81	7				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	81	7				
ulfur (15 ppm maximum)								
MPG	miles per gal	Not exempt	81	7				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	81	7				
ulfur (15 ppm maximum)								
MPG	miles per gal	Not exempt	81	7				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	94	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	94	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	94	13				
Unleaded Recommended)								
MPG	miles per gal	Not exempt	77	11				
Unleaded Recommended)								
MPG	miles per gal	Not exempt					93	16
Unleaded Recommended)								
MPG	miles per gal	Not exempt					93	16
Unleaded Recommended)								
MPG	miles per gal	Not exempt					93	16
Unleaded Recommended)								
MPG	miles per gal	Not exempt			94	16		
Unleaded Recommended)								
MPG	miles per gal	Not exempt			94	16		
Unleaded Recommended)								
MPG	miles per gal	Not exempt			94	16		
Unleaded Recommended)								
MPG	miles per gal	Not exempt			94	16		
Unleaded Recommended)								
MPG	miles per gal	Not exempt			102	16		

MPG	miles per gal	Unleaded Recommended)	Not exempt	102 16
MPG	miles per gal	ulfur (15 ppm maximum)	Not exempt	102 16
MPG	miles per gal	ulfur (15 ppm maximum)	Not exempt	102 16
MPG	miles per gal	Unleaded Recommended)	Not exempt	102 16
MPG	miles per gal	Unleaded Recommended)	Truck	
MPG	miles per gal	Unleaded Recommended)	Truck	
MPG	miles per gal	ulfur (15 ppm maximum)	Truck	
MPG	miles per gal	Unleaded Recommended)	Truck	

Annual Fu	EPA Calcı	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	eng code c	15	22	18				19.5
2200	2200								
2500	2500	eng code c	14	20	16				17.4
2300	2300	eng code c	15	22	18				19.5
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2400	2400	engine coc	15	21	17				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								

2850	2850				
2700	2700				
2850	2850				
2700	2700				
2850	2850	maximum ethanol corrected			
2850	2850	maximum ethanol corrected			
2850	2850	S/S indicator to yes, back to NO.			
3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4400	4400				
4750	4750				
3550	3550	Release date change			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1750	1750				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1800	1800				
2100	2100				
1900	1900				
2200	2200				
1900	1900	rounded adjusted highway CO2 rounding error corrected			

1900	1900	
1650	1650	corrected GHG rating
1600	1600	corrected CO2 values and annual fuel cost corrected
2500	2500	
2500	2500	
2500	2500	
2450	2450	corrected fuel economy rating to 5
3000	3000	

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hwy2 Unr	Comb2 Unr	City2 Unr	Hwy2 Unr	Comb2 Unr	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit

SB.

on changed to #1 for 1.8L engine code CNSB

L engine code CNTC.

ed to #2 for 2.0L engine code CNTC, GHG rating corrected

30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E8	MPG	miles per g
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E8	MPG	miles per g
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E8	MPG	miles per g

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E‹MPG	miles per g
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E‹MPG	miles per g
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E‹MPG	miles per g

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	24		Compact C
2600	400	281	347	2600	SIDI; FFV;	2	24	Compact C
				SIDI;	2	24		Compact C
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompa
2600	400	281	347	2600	SIDI; FFV;	2	23	Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Stati
				SIDI;	2	24		Compact C
				SIDI;	2	24		Compact C
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	25		Midsize Ca
				SIDI;	2	23		Subcompa
				SIDI;	2	24		Compact C

					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	231	Small SUV 4WD
or engine code CDMA and all TT models.					SIDI;	2	23	Subcompa
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seate
					SIDI;	2	24	Compact C
4250	711	410	576	4250	FFV;	2	24	Compact C
					SIDI;	2	23	Subcompa
4250	726	421	589	4250	FFV;	2	23	Subcompa
					SIDI;	2	25	Midsize Ca
4250	726	421	589	4250	FFV;	2	25	Midsize Ca
						1	15	Midsize Ca
						2	21	Two Seate
						2	21	Two Seate
						2	21	Two Seate
						2	21	Two Seate
					SIDI & PFI;	2	21	Two Seate
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
						2	24	Compact C
					SIDI;	2	24	Compact C
						2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
						2	23	Subcompa
					SIDI;	2	23	Subcompa
						2	23	Subcompa
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
						1	14	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	25	Midsize Ca

SIDI;	2	25	Midsize Ca
	2	25	Midsize Ca
	2	25	Midsize Ca
SIDI;	2	25	Midsize Ca
SIDI;	2	230	Small SUV 2WD
SIDI;	2	231	Small SUV 4WD
	2	233	Standard SUV 4W
SIDI;	2	233	Standard SUV 4W

SC Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	2/25/2014		16011		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		16013		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		16012		N	N		
car	Vehicle Specific 5-cycle	1/15/2014		16197		N	N		
car	Derived 5-cycle label	6/9/2014		15670		N	N		
car	Derived 5-cycle label	6/9/2014		16311		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15675		N	N		
car	Derived 5-cycle label	6/9/2014		16313		N	N		
car	Derived 5-cycle label	6/9/2014		16312		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15676		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15673		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15674		N	N		
car	Derived 5-cycle label	6/9/2014		16062		N	N		
car	Vehicle Specific 5-cycle	6/10/2014		15458		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		16061		N	N		
car	Vehicle Specific 5-cycle	6/10/2014		15459		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15647		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15385		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15456		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15648		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15386		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15442		N	N		
cars	Derived 5-cycle label	6/9/2014		16217		N	N		
car	Derived 5-cycle label	8/4/2014		16057		N	N		
car	Vehicle Specific 5-cycle	8/4/2014		15650		N	N		
	Derived 5-cycle label	6/9/2014		16034		N	N		
	Vehicle Specific 5-cycle	6/9/2014		16060		N	N		
	Vehicle Specific 5-cycle	6/10/2014		15460		N	N		
	Vehicle Specific 5-cycle	6/9/2014		15999		N	N		
D	Vehicle Specific 5-cycle	6/12/2014		15408		N	N		
D	Derived 5-cycle label	6/9/2014		15711		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15493		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15497		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15601		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15598		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15492		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15496		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15600		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15597		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15589		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		15590		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		15577		N	N		
car	Vehicle Specific 5-cycle	8/4/2014		15651		N	N		
car	Vehicle Specific 5-cycle	6/9/2014		16064		N	N		

car	Vehicle Specific 5-cycle label	6/19/2014	16067	N	N
car	Vehicle Specific 5-cycle label	6/19/2014	16065	N	N
car	Vehicle Specific 5-cycle label	6/19/2014	16068	N	N
car	Vehicle Specific 5-cycle label	6/19/2014	16066	N	N
car	Vehicle Specific 5-cycle label	6/12/2014	15576	N	N
car	Vehicle Specific 5-cycle label	6/12/2014	15575	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15400	N	N
	Vehicle Specific 5-cycle label	6/19/2014	16059	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/21/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15682	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Derived 5-cycle label	8/25/2014	16388	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	8/25/2014	16339	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Derived 5-cycle label	8/25/2014	16389	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Derived 5-cycle label	8/25/2014	16340	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Derived 5-cycle label	8/25/2014	16418	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16380	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16381	N	N
car	Derived 5-cycle label	7/14/2014	16393	N	N

car	Derived 5-cycle label	7/14/2014	16273	N	N
car	Derived 5-cycle label	7/14/2014	16364	N	N
car	Derived 5-cycle label	7/28/2014	16283	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	Battery(s)
N	N	Engine cod	N		N		N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	N		Y	CONTINUC	Y	Audi Valve	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	

N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Generatior N	Y	CONTINUCY	AUDI VALV
N	N	Generatior N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Y	Cylinder de Y	Variation c N	
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	ELECTRON Y	HYDRAULI(N	
N	N	Engine Coc Y	ELECTRON Y	HYDRAULI(N	
N	N	Engine Coc Y	ELECTRON Y	HYDRAULI(N	
N	N	ENGINE CC N	Y	INLET AND N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	N	Y	CONTINUC N	
N	N	1.8L Engin(N	Y	CONTINUC N	
N	N	2.0L Engin(N	Y	CONTINUCY	Audi Valve
N	N	2.0L Engin(N	Y	CONTINUCY	Audi Valve
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	

N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	N		N
N	N	Engine Coc	N	N		N
N	N	Engine cod	N	Y	Electronic	N
N	N		N	Y	position of	N
N	N		N	Y	position of	N
N	N	Engine Coc	N	N		N
N	N		N	Y	INTAKE / E	N

evice Desc	Energy St	# Batterie	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
alves is a valve lift of zero (all valves closed), but fuel injection and ignition are activated as described	The first valve lift profile (all valves closed), but fuel injection and ignition are activated as described									
alves is a valve lift of zero (all valves closed), but fuel injection and ignition are activated as described	The first valve lift profile (all valves closed), but fuel injection and ignition are activated as described									
tolled and hydraulically adjusted.										
		1	Lithium Ior		266	5.00	37.0	On-Board		
EMENT										
EMENT										
ECHANICAL-HYDRAULIC										
ECHANICAL-HYDRAULIC										
EMENT										
EMENT										
ECHANICAL-HYDRAULIC										
ECHANICAL-HYDRAULIC										
alves is a valve lift of zero (all valves closed), but fuel injection and ignition are activated as described	The first valve lift profile (all valves closed), but fuel injection and ignition are activated as described									
valves only										

valves is variable lift over the full range of engine speed, from low to high rpm. Deactivation of one intake valve per cylinder at low engine speeds and part load increases the swirl of the remaining intake valve for improved mixture preparation and combustion stability. The exhaust valves are not deactivated.

valves is variable lift over the full range of engine speed, from low to high rpm. Deactivation of one intake valve per cylinder at low engine speeds and part load increases the swirl of the remaining intake valve for improved mixture preparation and combustion stability. The exhaust valves are not deactivated.

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ECHANICAL-HYDRAULIC

valves is variable lift over the full range of engine speed, from low to high rpm. Deactivation of one intake valve per cylinder at low engine speeds and part load increases the swirl of the remaining intake valve for improved mixture preparation and combustion stability. The exhaust valves are not deactivated.
ECHANICAL-HYDRAULIC

valves is variable lift over the full range of engine speed, from low to high rpm. Deactivation of one intake valve per cylinder at low engine speeds and part load increases the swirl of the remaining intake valve for improved mixture preparation and combustion stability. The exhaust valves are not deactivated.
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.
C/4HO2S(2)-FM3 catalyst
C/4HO2S(2)-FM3 catalyst
C/4HO2S(2)-FM3 catalyst
ECHANICAL-HYDRAULIC
AMS
AMS
AMS
onv.
AMS
onv.
AMS
AMS
onv.
AMS
onv.
controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

AMS
AMS

AMS
AMS

AMS
onv.
onv.

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
ed above 3									
ed above 3									
Electrical R		Both	Y					1	AC Inducti
ed above 3									

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

and above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
h				GDI	Spark Ignit			N	5W30 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
h				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common F			N	5W30 VW
		40		GDI	Spark Ignit	N	N	N	5W40 VW
				CRDI	Common F			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit			N	5W30 VW
h				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit			N	5W40 VW

	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
h	GDI	Spark Ignit	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit N	N	5W40
	GDI	Spark Ignit N	N	5W40
h	GDI	Spark Ignit	N	5W30 VW
	MFI	Multipoint N	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
	MFI	Multipoint N	N	5W30 VW
h	GDI	Spark Ignit	N	5W30 VW
	MFI	Multipoint N	N	5W30 VW
	MFI	Multipoint	N	0W40 / VV
	MFI	Multipoint	N	10W60 VW
	MFI	Multipoint	N	5W30 VW
	MFI	Multipoint	N	5W30 VW
	MFI	Multipoint	N	5W30 VW
	GDPI	Spark Ignit	N	5W30 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common R	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common R	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common R	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common R	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W-40 VW
	GDI	Spark Ignit	N	5W40 / VV
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	MFI	Multipoint	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW
	GDI	Spark Ignit	N	5W40 VW

GDI	Spark Ignit	N	5W40 VW
CRDI	Common R	N	5W40 VW
CRDI	Common R	N	5W40 VW
GDI	Spark Ignit	N	5W40 VW
GDI	Spark Ignit	N	5W40 VW
GDI	Spark Ignit	N	5W40 VW
CRDI	Common R	N	5W30 VW
GDI	Spark Ignit	N	5W40 VW

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AV-S	Auto(AV-S						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M						
N	No	Auto(AV-S	Auto(AV-S	Audi A6 CV					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 qu					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S	Auto(AM-S						
N	No	Manual(M	Manual(M						
M 50500	No	Auto(AM-S	Auto(AM-S						
M 50500	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Manual(M	Manual(M						
M 50500	No	Auto(AM-S	Auto(AM-S						
M 50500	No	Manual(M	Manual(M						
N 50700	No	Auto(AM-S	Auto(AM-S						
N 50700	No	Auto(AM-S	Auto(AM-S						
N 50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						

N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N50700	No	Auto(AM-S	Auto(AM-S
N50700	No	Auto(AM-S	Auto(AM-S
N50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N	No	Auto(AM-S	Auto(AM-S	TT Coupe c
N	No	Auto(AM-S	Auto(AM-S	TT Coupe c
N50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
NVW50500	No	Auto(S8)	Auto(S8)
N 50500	No	Auto(AM-S	Auto(AM-S
Y50700	Yes	Auto(AM-S	Auto(AM-S
N50700	No	Auto(AM-S	Auto(AM-S	VENENO
Y50700	Yes	Auto(AM-S	Auto(AM-S
N	No	Auto(AM-S	Auto(AM-S
N	No	Auto(S6)	Auto(S6)
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Manual(M	Manual(M
N	No	Auto(S6)	Auto(S6)
N	No	Auto(AM-S	Auto(AM-S
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(S6)	Auto(S6)
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Manual(M	Manual(M
N	No	Auto(S6)	Auto(S6)

N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(S6)	Auto(S6)	Tiguan fror
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[illegible]	EPA Calculated Gas G	[illegible]	[illegible] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9		7	7	FVGAV02.(	9		
36.2		7	7	FVGAV02.(	9		
34.3		6	6	FVGAV02.(	9		
35.2		7	7	FVGAV02.(	9		
35.4		7	7	FVGAV02.(	5		
32.7		6	6	FVGAJ02.0	5		
33.1		6	6	FVGAV02.(	5		
30.1		5	5	FVGAJ02.0	5		
32.7		6	6	FVGAJ02.0	5		
33.1		6	6	FVGAV02.(	5		
36.9		7	7	FVGAV02.(	5		
30.0		5	5	FVGAV02.(	5		
28.1		5	5	FVGAJ03.0	5		
37.7		7	6	FVGAJ03.0	5		
27.9		5	5	FVGAJ03.0	5		
37.7		7	6	FVGAJ03.0	5		
28.8		5	5	FVGAV03.(	5		
28.0		5	5	FVGAV04.(	5		
36.9		7	6	FVGAJ03.0	5		
28.8		5	5	FVGAV03.(	5		
27.6		5	5	FVGAV04.(	5		
21.1		4	4	FVGAV06.3	5		
31.2		6	6	FVGAJ02.0	5		
30.0		5	5	FVGAV02.(	5		
29.5		5	5	FVGAV02.(	5		
29.6		5	5	FVGAJ02.0	5		
27.2		5	5	FVGAJ03.0	5		
34.3		7	5	FVGAJ03.0	5		
34.0		6	6	FVGAT02.(	5		
28.1		5	4	FVGAT03.(	5		
23.1		4	4	FVGAT03.(	5		
20.7		4	4	FVGAV04.2	5		
17.2		2	2	FVGAV04.2	5		
19.6		3	3	FVGAV05.2	5		
17.0		2	2	FVGAV05.2	5		
20.7		4	4	FVGAV04.2	5		
17.2		2	2	FVGAV04.2	5		
19.6		3	3	FVGAV05.2	5		
17.0		2	2	FVGAV05.2	5		
22.8		4	4	FVGAV04.2	5		
22.6		4	4	FVGAV04.2	5		
24.1		4	4	FVGAV04.(	5		
33.2		6	6	FVGAV02.(	5		
26.9		5	5	FVGAJ03.0	5		

23.5	[redacted]	5	5 FVGAJ03.0	5
26.9		5	5 FVGAJ03.0	5
23.5		5	5 FVGAJ03.0	5
26.4		5	5 FVGAJ03.0	5
25.4		5	5 FVGAV04.(	5
25.4		5	5 FVGAV04.(	5
25.0		5	5 FVGAV04.(	5
24.9		4	4 FVGAJ03.0	5
33.3		6	6 FVGAV02.(	5
33.3		6	6 FVGAV02.(	5
23.7		4	4 FVGAV04.(	5
19.5		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
15.9		1	1 FVGAV06.8	5
12.6		1	1 FVGAV08.(	5
16.4		1	1 FVGAV06.5	5
15.8		1	1 FVGAV06.5	5
14.6		1	1 FVGAV06.5	5
20.0		3	3 FVGAV05.2	5
37.0		7	7 FVGAV02.(	7
35.9		7	7 FVGAV02.(	7
33.9		6	6 FVGAV02.(	7
46.6		8	7 FVGAV02.(	5
33.1		6	6 FVGAV02.(	7
46.4		8	7 FVGAV02.(	5
35.9		7	7 FVGAV02.(	7
33.3		6	6 FVGAV02.(	7
45.8		8	7 FVGAV02.(	5
33.1		6	6 FVGAV02.(	7
45.3		8	7 FVGAV02.(	5
32.2		6	6 FVGAJ02.0	5
31.4		6	6 FVGAJ02.0	5
24.8		5	5 FVGAV03.(	5
32.4		6	6 FVGAV02.(	5
39.3		7	7 FVGAV02.(	9
35.9		7	7 FVGAV02.(	9
35.8		7	7 FVGAV02.(	9
38.4		7	7 FVGAV02.(	7
34.8		7	7 FVGAV02.(	7
35.9		7	7 FVGAV02.(	5
34.0		6	6 FVGAV02.(	7
37.7		7	7 FVGAV02.(	7

37.3	[redacted]	7	7 FVGAV02.(	7
46.2		8	7 FVGAV02.(	5
46.9		8	7 FVGAV02.(	5
28.5		5	5 FVGAV03.(	5
29.7		5	5 FVGAJ02.0	5
29.6		5	5 FVGAJ02.0	5
29.6		5	5 FVGAT03.(	5
25.0		4	4 FVGAT03.(	5

| | | |

FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	7
FVGAV02.(	7
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5

[illegible]	You Save$	You Spend$	City CO2 (R	Hwy CO2 (G	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	410	290	356			
	0		398	277	343			
		1500	446	314	386			
		1000	410	290	356			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1000	421	315	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2000	496	347	429			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		2500	488	321	413			

	3250	519	341	439
	2500	488	321	413
	3250	519	341	439
	2500	500	341	428
	3250	531	330	441
	3250	531	330	441
	3250	534	331	442
	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	11000	831	523	692
	12750	902	547	742
	6750	629	441	544
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2250		350	240	300
750		358	271	319
750		355	258	311
2000		351	239	301
1000		379	281	334
1500		357	259	313
0		389	274	338
1500		363	247	311

1500		366	251	314
2750		340	242	296
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5	
289.0	188.0	243.6	362.1	255.5	314.1	
305.0	200.0	257.8	378.6	280.1	334.3	
294.0	198.0	250.8	366.0	271.0	323.2	
292.0	199.0	250.2	373.7	280.2	331.6	
323.0	206.0	270.4	410.3	289.6	356.0	
321.2	202.4	267.7	398.0	276.6	343.4	
353.0	224.0	295.0	445.7	313.9	386.4	
323.0	206.0	270.4	410.3	289.6	356.0	
321.2	202.4	267.7	398.0	276.6	343.4	
282.0	189.0	240.2	360.0	272.0	320.4	
358.0	219.0	295.4	452.0	306.0	386.3	
383.5	233.0	315.8	481.7	326.0	411.6	
331.0	194.0	269.4	415.7	267.3	348.9	
385.0	236.0	318.0	492.9	320.9	415.6	
331.0	194.0	269.4	415.7	267.3	348.9	
376.5	225.0	308.3	473.4	302.9	396.7	
391.0	224.0	315.9	483.9	299.0	400.7	
339.0	198.0	275.6	425.6	280.1	360.1	
376.5	225.0	308.3	473.4	302.9	396.7	
396.0	226.0	319.5	492.3	309.7	410.1	
515.0	310.0	422.8	640.3	403.3	533.6	
332.0	225.0	283.9	420.9	315.2	373.3	
357.5	223.0	297.0	451.0	312.5	388.7	
357.0	230.0	299.9	445.6	315.7	387.1	
358.0	230.0	300.4	451.6	321.9	393.2	
390.0	251.0	327.4	496.0	347.0	429.0	
348.0	231.0	295.4	430.5	328.5	384.6	
380.0	223.0	309.4	369.0	298.0	337.0	
446.0	260.0	362.3	541.0	369.0	463.6	
458.0	295.0	384.6	569.6	409.5	497.6	
540.6	299.8	432.3	656.3	394.3	538.4	
651.3	362.7	521.4	771.6	439.1	622.0	
577.0	309.4	456.6	685.6	400.2	557.2	
646.3	377.5	525.3	753.1	454.0	618.5	
540.6	299.8	432.3	656.3	394.3	538.4	
651.3	362.7	521.4	771.6	439.1	622.0	
577.0	309.4	456.6	685.6	400.2	557.2	
646.3	377.5	525.3	753.1	454.0	618.5	
466.0	296.0	389.5	562.0	379.0	479.6	
463.0	307.0	392.8	558.0	398.0	486.0	
467.0	253.0	370.7	573.0	336.1	466.4	
311.0	214.0	267.4	381.4	289.2	339.9	
396.0	248.0	329.4	488.0	321.0	412.8	

443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
708.0	392.0	565.8	831.0	523.0	692.4
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
272.0	169.0	225.6	350.1	239.8	300.5
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
272.8	168.4	255.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
302.0	179.0	246.6	356.6	259.3	312.8
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0

285.3	177.3	236.7	365.8	251.0	314.1
260.0	169.0	219.0	340.1	241.6	295.8
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	Comb Vol Higher	Final Label
N	3.7	3.7
N	3.6	3.6
N	3.8	3.8
N	3.7	3.7
N	3.7	3.7
N	4.0	4.0
N	3.8	3.8
N	4.3	4.3
N	4.0	4.0
N	3.8	3.8
N	3.6	3.6
N	4.3	4.3
N	4.5	4.5
N	3.4	3.4
N	4.8	4.8
N	3.4	3.4
N	4.5	4.5
N	4.5	4.5
N	3.6	3.6
N	4.5	4.5
N	4.5	4.5
N	5.9	5.9
N	4.2	4.2
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.8	4.8
N	3.7	3.7
N	3.8	3.8
N	4.5	4.5
N	5.6	5.6
N	5.9	5.9
N	7.1	7.1
N	6.2	6.2
N	7.1	7.1
N	5.9	5.9
N	7.1	7.1
N	6.2	6.2
N	7.1	7.1
N	5.6	5.6
N	5.6	5.6
N	5.3	5.3
N	3.8	3.8
N	4.8	4.8

N	5.0	5.0
N	4.8	4.8
N	5.0	5.0
N	4.8	4.8
N	5.0	5.0
N	5.0	5.0
N	5.0	5.0
N	5.3	5.3
N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	7.7	7.7
N	8.3	8.3
N	6.2	6.2
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	3.7	3.7
N	4.0	4.0
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.3	3.3
N	3.6	3.6
N	3.6	3.6
N	3.3	3.3
N	3.7	3.7
N	3.6	3.6
N	3.8	3.8
N	3.6	3.6

N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

EPA_UNR	EPA_UNR	EPA_UNR	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richarc	6
					Mr Richard E Thomas Jr	
					Mr Richarc	5
					Mr Richarc	6
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
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					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richarc	6
					Mr Richard E Thomas Jr	
					Mr Richard E Thomas Jr	
					Mr Richarc	5
					Mr Richard E Thomas Jr	
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Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: ross.gatzke@porsche.us[ross.gatzke@porsche.us]
Cc: walter.lewis@porsche.us[walter.lewis@porsche.us]
From: Good, David
Sent: Thur 7/3/2014 9:21:28 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014
Porsche_2015 FEGuide-all rel dates-no-sales-7-1-2014.xlsx

Ross,

re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Attached are the data in Verify as of July 1, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on July 9, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comn	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2015 Porsche	Porsche	911 Carrer	PRX	102	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	101	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	110	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	109	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	112	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	111	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	114	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	113	3.8	6
Error: UnrcY		2015 Porsche	Porsche	911 Carrer	PRX	116	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	115	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	104	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	103	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	106	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	105	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	108	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	107	3.8	6
		2015 Porsche	Porsche	911 GT3	PRX	531	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX	542	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX	540	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX	544	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX	543	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX	521	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX	523	3.8	6
		2015 Porsche	Porsche	Boxster	PRX	202	2.7	6
		2015 Porsche	Porsche	Boxster	PRX	201	2.7	6
		2015 Porsche	Porsche	Boxster GT	PRX	224	3.4	6
		2015 Porsche	Porsche	Boxster GT	PRX	223	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX	222	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX	221	3.4	6
		2015 Porsche	Porsche	Cayman	PRX	212	2.7	6
		2015 Porsche	Porsche	Cayman	PRX	211	2.7	6
		2015 Porsche	Porsche	Cayman G	PRX	234	3.4	6
		2015 Porsche	Porsche	Cayman G	PRX	233	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX	232	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX	231	3.4	6
		2015 Porsche	Porsche	Macan S	PRX	311	3.0	6
		2015 Porsche	Porsche	Macan Tur	PRX	321	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	601	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	602	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	616	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	617	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	621	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	611	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	631	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	632	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	636	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	637	4.8	8

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	20	28	23				25.5000	39.5000	30.3389
Manual(M	19	27	22				23.7000	38.2000	28.5822
Auto(AM-S	20	28	23				25.4965	38.6494	30.1071
Manual(M	19	27	22				24.0491	37.8468	28.7688
Auto(AM-S	20	27	22				24.9475	37.5494	29.3854
Manual(M	19	26	22				23.5983	36.5997	28.0884
Auto(AM-S	19	26	22				24.1000	36.7000	28.5037
Manual(M	18	26	21				23.1000	36.8000	27.7487
Auto(AM-S	19	26	21				23.3000	36.4000	27.8027
Manual(M	18	26	21				22.8000	36.1000	27.3312
Auto(AM-S	21	28	23				25.9904	39.4499	30.7045
Manual(M	19	27	22				24.0491	37.9499	28.7955
Auto(AM-S	19	27	22				24.5000	37.9000	29.1356
Manual(M	19	27	22				23.8449	37.9484	28.6337
Auto(AM-S	19	27	22				23.9000	38.0000	28.6906
Manual(M	19	27	22				23.6474	37.0494	28.2451
Auto(AM-S	15	20	17				18.2000	28.3000	21.6822
Auto(AM-S	19	26	22				24.1000	36.9000	28.5578
Manual(M	18	26	21				23.0000	36.5000	27.5924
Auto(AM-S	18	25	21				23.1000	35.4000	27.3812
Manual(M	18	26	21				22.5000	35.6000	26.9652
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	22	32	26				27.9000	44.9000	33.6298
Manual(M	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S	21	30	24				26.3000	41.9000	31.5932
Manual(M	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S	22	32	26				27.9000	44.9000	33.6298
Manual(M	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S	21	30	24				26.3000	41.9000	31.5932
Manual(M	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S	17	23	19				21.4471	31.6987	25.1000
Auto(AM-S	17	23	19				20.6947	32.3997	24.7122
Auto(AM-S	18	28	22				22.9368	39.0499	28.1669
Auto(AM-S	18	27	21				22.5783	37.5997	27.5271
Auto(AM-S	17	27	21				21.9036	37.2798	26.8955
Auto(AM-S	17	26	20				21.4891	37.0141	26.4887
Auto(AM-S	16	24	19				19.3871	33.7000	23.9679
Auto(AM-S	17	27	21				21.9036	37.2798	26.8955
Auto(AM-S	15	24	18				19.1667	33.7481	23.7927
Auto(AM-S	15	24	18				18.9742	33.3000	23.5293
Auto(AM-S	15	24	18				19.1667	33.7481	23.7927
Auto(AM-S	15	24	18				18.9742	33.3000	23.5293

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Oth	# Gears
20.2000	28.2000	23.2000		NA	Naturally A	AMS	Automatec		7
18.8000	27.3000	21.9000		NA	Naturally A	M	Manual		7
20.1778	27.6110	22.9592		NA	Naturally A	AMS	Automatec		7
19.1036	27.0590	22.0164		NA	Naturally A	M	Manual		7
19.7713	26.8542	22.4340		NA	Naturally A	AMS	Automatec		7
18.7674	26.1995	21.5137		NA	Naturally A	M	Manual		7
19.1000	26.3000	21.8000		NA	Naturally A	AMS	Automatec		7
18.4000	26.3000	21.2759		NA	Naturally A	M	Manual		7
18.5000	26.1000	21.3000		NA	Naturally A	AMS	Automatec		7
18.2000	25.9000	21.0000		NA	Naturally A	M	Manual		7
20.5425	28.1607	23.3899		NA	Naturally A	AMS	Automatec		7
19.1036	27.1300	22.0375		NA	Naturally A	M	Manual		7
19.4000	27.1000	22.2000		NA	Naturally A	AMS	Automatec		7
18.9514	27.1289	21.9255		NA	Naturally A	M	Manual		7
19.0000	27.2000	22.0000		NA	Naturally A	AMS	Automatec		7
18.8041	26.5097	21.6338		NA	Naturally A	M	Manual		7
14.7000	20.4000	16.8000	G	NA	Naturally A	AMS	Automatec		7
19.1000	26.4000	21.8000		NA	Naturally A	AMS	Automatec		7
18.3000	26.1000	21.1000		NA	Naturally A	M	Manual		7
18.4000	25.4000	21.0000		NA	Naturally A	AMS	Automatec		7
17.9000	25.5000	20.7000		NA	Naturally A	M	Manual		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7
21.9000	31.9000	25.5000		NA	Naturally A	AMS	Automatec		7
20.5000	29.6000	23.8000		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automatec		7
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8000	29.8000	24.1000		NA	Naturally A	AMS	Automatec		7
19.7000	27.5000	22.6000		NA	Naturally A	M	Manual		6
21.9000	31.9000	25.5000		NA	Naturally A	AMS	Automatec		7
20.5000	29.6000	23.8000		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automatec		7
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8000	29.8000	24.1000		NA	Naturally A	AMS	Automatec		7
19.7000	27.5000	22.6000		NA	Naturally A	M	Manual		6
17.1522	22.8013	19.3044		TC	Turbochar	AMS	Automatec		7
16.5830	23.2893	19.0517		TC	Turbochar	AMS	Automatec		7
18.3000	27.9000	21.7000		NA	Naturally A	AMS	Automatec		7
18.0000	26.9000	21.1000		NA	Naturally A	AMS	Automatec		7
17.4965	26.6685	20.7002		TC	Turbochar	AMS	Automatec		7
17.1840	26.4853	20.4094		TC	Turbochar	AMS	Automatec		7
15.5885	24.1929	18.5588		NA	Naturally A	AMS	Automatec		7
17.4965	26.6685	20.7002		TC	Turbochar	AMS	Automatec		7
15.4000	24.2000	18.4000		TC	Turbochar	AMS	Automatec		7
15.3000	23.9000	18.3000		TC	Turbochar	AMS	Automatec		7
15.4000	24.2000	18.4000		TC	Turbochar	AMS	Automatec		7
15.3000	23.9000	18.3000		TC	Turbochar	AMS	Automatec		7

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated M	Manual with	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXT03.6	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXT03.6	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV03.6	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV03.6	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV03.6	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV03.6	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV04.8	10		GP		Gasoline (F
tomated M	Manual with	R	2-Wheel D	FPRXV03.6	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV04.8	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV04.8	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV04.8	10		GP		Gasoline (F
tomated M	Manual with	A	All Wheel I	FPRXV04.8	10		GP		Gasoline (F

Fuel Unit Type	Gas Guzzl	Gas Guzzl	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Truck						
MPG (Unleaded Recommended)	miles per gal	Truck						
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		

Annual Fu	EPA Calcu	Comment	City2 FE (l	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2500	2500	911 Carrera A7							
2600	2600	911 Carrera M7							
2500	2500	911 Carrera 4 A7							
2600	2600	911 Carrera 4 M7							
2600	2600	911 Carrera 4 Cabriolet A7							
2600	2600	911 Carrera 4 Cabriolet M7							
2600	2600	911 Carrera 4S A7							
2700	2700	911 Carrera 4S M7							
2700	2700	911 Carrera 4S Cabriolet A7							
2700	2700	911 Carrera 4S Cabriolet M7							
2500	2500	911 Carrera Cabriolet A7							
2600	2600	911 Carrera Cabriolet M7							
2600	2600	911 Carrera S A7							
2600	2600	911 Carrera S M7							
2600	2600	911 Carrera S Cabriolet A7							
2600	2600	911 Carrera S Cabriolet M7							
3350	3350	911 GT3							
2600	2600	911 Targa A7							
2700	2700	911 Targa M7							
2700	2700	911 Targa S A7							
2700	2700	911 Targa S M7							
2850	2850	911 Turbo / Turbo Cabriolet							
2850	2850	911 Turbo S / Turbo S Cabriolet							
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
2600	2600	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2850	2850	Harmonic average of Start/Stop ON and OFF.							
3000	3000	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							

Alternative Fuel
Hwy2 Unr Comb2 Unr Range2 - Fuel2 Usa Fuel2 Usa Fuel2 Unit Fuel2 Unit

rage of SS ON and SS OFF.
rage of SS ON and SS OFF.

Alternative Fuel	Fuel2 AmCity	CO2 IHwy	CO2 Comb	CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	21	Two Seate	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	22	Minicompa	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	21	Two Seate	
						SIDI;	2	231	Small SUV 4WD	
						SIDI;	2	231	Small SUV 4WD	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	
						SIDI;	2	26	Large Cars	

MC Car/Truck	Calc Appr	Sales	Release D	EPA FE Label Dataset ID	[redacted]	Unique La	Label Rec	Relabel	Relabel D
car	Derived 5-cycle label		6/23/2014	16317		Y	N		
car	Derived 5-cycle label		6/23/2014	16316		Y	N		
car	Derived 5-cycle label		6/23/2014	16325		N	N		
car	Derived 5-cycle label		6/23/2014	16324		N	N		
car	Derived 5-cycle label		6/23/2014	16327		N	N		
car	Derived 5-cycle label		6/23/2014	16326		Y	N		
car	Derived 5-cycle label		6/23/2014	16329		N	N		
car	Derived 5-cycle label		6/23/2014	16328		Y	N		
car	Derived 5-cycle label		6/23/2014	16411		N	N		
car	Derived 5-cycle label		6/23/2014	16330		N	N		
car	Derived 5-cycle label		6/23/2014	16412		Y	N		
car	Derived 5-cycle label		6/23/2014	16318		Y	N		
car	Derived 5-cycle label		6/23/2014	16321		Y	N		
car	Derived 5-cycle label		6/23/2014	16320		Y	N		
car	Derived 5-cycle label		6/23/2014	16323		Y	N		
car	Derived 5-cycle label		6/23/2014	16322		Y	N		
car	Derived 5-cycle label		6/23/2014	16341		N	N		
car	Derived 5-cycle label		6/23/2014	16342		Y	N		
car	Derived 5-cycle label		6/23/2014	16391		Y	N		
car	Derived 5-cycle label		6/23/2014	16344		N	N		
car	Derived 5-cycle label		6/23/2014	16343		Y	N		
car	Derived 5-cycle label		6/23/2014	16337		N	N		
car	Derived 5-cycle label		6/23/2014	16338		N	N		
car	Derived 5-cycle label		6/23/2014	16231		N	N		
car	Derived 5-cycle label		6/23/2014	16229		N	N		
car	Derived 5-cycle label		6/23/2014	16250		Y	N		
car	Derived 5-cycle label		6/23/2014	16248		Y	N		
car	Derived 5-cycle label		6/23/2014	16238		Y	N		
car	Derived 5-cycle label		6/23/2014	16236		Y	N		
car	Derived 5-cycle label		6/23/2014	16232		N	N		
car	Derived 5-cycle label		6/23/2014	16230		N	N		
car	Derived 5-cycle label		6/23/2014	16251		Y	N		
car	Derived 5-cycle label		6/23/2014	16249		Y	N		
car	Derived 5-cycle label		6/23/2014	16239		Y	N		
car	Derived 5-cycle label		6/23/2014	16237		Y	N		
	Derived 5-cycle label		5/9/2014	15889		N	N		
	Derived 5-cycle label		5/9/2014	15890		N	N		
car	Derived 5-cycle label		6/16/2014	16105			N		
car	Derived 5-cycle label		6/16/2014	16107			N		
car	Derived 5-cycle label		6/16/2014	16110			N		
car	Derived 5-cycle label		6/16/2014	16111			N		
car	Derived 5-cycle label		6/16/2014	16112			N		
car	Derived 5-cycle label		6/16/2014	16109			N		
car	Derived 5-cycle label		6/9/2014	16039			N		
car	Derived 5-cycle label		6/9/2014	16040			N		
car	Derived 5-cycle label		6/9/2014	16041			N		
car	Derived 5-cycle label		6/9/2014	16042			N		

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N		N	Y	Porsche V\Y		Porsche V\		

evice Desc	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacito

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell [	Usable H2	Fuel Cell (	HEV-EV C#	Drive Mc	Motor Ger

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Boxster GT					
N	No	Auto(AM-S	Auto(AM-S	Boxster S					
N	No	Manual(M	Manual(M	Boxster S					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Cayman G					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Cayman S					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					

EPA Calcu	EPA Calculated Gas G	[redacted]	GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
30.5	[redacted]	5	5	FPRXV04.0	5		
28.8	[redacted]	5	5	FPRXV04.0	5		
30.1	[redacted]	5	5	FPRXV04.0	5		
28.9	[redacted]	5	5	FPRXV04.0	5		
29.5	[redacted]	5	5	FPRXV04.0	5		
28.2	[redacted]	5	5	FPRXV04.0	5		
28.8	[redacted]	5	5	FPRXV04.0	5		
28.0	[redacted]	5	5	FPRXV04.0	5		
28.0	[redacted]	5	5	FPRXV04.0	5		
27.6	[redacted]	5	5	FPRXV04.0	5		
30.6	[redacted]	5	5	FPRXV04.0	5		
28.9	[redacted]	5	5	FPRXV04.0	5		
29.4	[redacted]	5	5	FPRXV04.0	5		
28.6	[redacted]	5	5	FPRXV04.0	5		
28.9	[redacted]	5	5	FPRXV04.0	5		
28.3	[redacted]	5	5	FPRXV04.0	5		
21.8	[redacted]	4	4	FPRXV04.0	5		
29.4	[redacted]	5	5	FPRXV04.0	5		
28.2	[redacted]	5	5	FPRXV04.0	5		
27.5	[redacted]	5	5	FPRXV04.0	5		
27.1	[redacted]	5	5	FPRXV04.0	5		
27.0	[redacted]	5	5	FPRXV04.0	5		
27.0	[redacted]	5	5	FPRXV04.0	5		
33.9	[redacted]	6	6	FPRXV02.7	5		
31.4	[redacted]	6	6	FPRXV02.7	5		
32.8	[redacted]	6	6	FPRXV03.4	5		
29.0	[redacted]	5	5	FPRXV03.4	5		
31.8	[redacted]	6	6	FPRXV03.4	5		
31.8	[redacted]	5	5	FPRXV03.4	5		
33.9	[redacted]	6	6	FPRXV02.7	5		
31.4	[redacted]	6	6	FPRXV02.7	5		
32.8	[redacted]	6	6	FPRXV03.4	5		
29.0	[redacted]	5	5	FPRXV03.4	5		
31.8	[redacted]	6	6	FPRXV03.4	5		
31.8	[redacted]	5	5	FPRXV03.4	5		
	[redacted]	4	4	FPRXT03.6	5		
	[redacted]	4	4	FPRXT03.6	5		
28.4	[redacted]	5	5	FPRXV03.6	5		
27.7	[redacted]	5	5	FPRXV03.6	5		
27.1	[redacted]	5	5	FPRXV03.6	5		
26.7	[redacted]	5	5	FPRXV03.6	5		
24.1	[redacted]	4	4	FPRXV04.8	5		
27.1	[redacted]	5	5	FPRXV03.6	5		
24.0	[redacted]	4	4	FPRXV04.8	5		
23.7	[redacted]	4	4	FPRXV04.8	5		
24.0	[redacted]	4	4	FPRXV04.8	5		
23.7	[redacted]	4	4	FPRXV04.8	5		

| | | |

[illegible]	You Save	You Spend	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		1500	441	315	384			
		2000	473	326	407			
		1500	440	322	387			
		2000	466	329	404			
		2000	449	331	396			
		2000	473	340	413			
		2000	462	338	406			
		2500	482	336	416			
		2500	480	341	417			
		2500	487	344	423			
		1500	433	315	380			
		2000	465	328	404			
		2000	455	328	398			
		2000	469	328	406			
		2000	468	328	405			
		2000	472	335	410			
		5750	606	434	529			
		2000	464	337	407			
		2500	485	341	420			
		2500	483	350	423			
		2500	496	349	430			
		3250	518	363	448			
		3250	518	363	448			
	0		406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
	0		406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
		4000	517	388	459			
		4000	537	382	467			
		2000	487	319	411			
		2500	494	331	421			
		2500	508	333	429			
		3250	517	336	436			
		4000	572	368	480			
		2500	508	333	429			
		4750	577	368	483			
		4750	583	372	488			
		4750	577	368	483			
		4750	583	372	488			

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
349.3	224.8	293.3	441.3	314.9	384.4		
375.9	233.1	311.6	472.7	326.1	406.7		
348.5	229.9	295.1	440.4	321.8	387.0		
370.1	235.0	309.3	465.9	328.7	404.2		
355.9	237.0	302.4	449.1	331.4	396.1		
376.4	243.1	316.4	473.3	339.6	413.1		
367.1	241.7	310.7	462.3	337.7	406.2		
383.6	240.5	319.2	481.8	336.1	416.2		
382.2	243.8	319.9	480.1	340.5	417.3		
388.2	246.5	324.4	487.2	344.2	422.8		
342.0	225.2	289.4	432.7	315.5	380.0		
369.6	234.6	308.8	465.3	328.1	403.6		
361.0	234.3	304.0	455.1	327.7	397.8		
372.8	234.8	310.7	469.1	328.4	405.8		
372.2	234.2	310.1	468.3	327.6	405.0		
375.4	239.8	314.4	472.1	335.1	410.4		
488.4	313.5	409.7	605.5	434.4	528.5		
368.9	240.9	311.3	464.4	336.6	406.9		
386.4	243.9	322.3	485.1	340.7	420.1		
384.9	251.1	324.7	483.3	350.4	423.5		
396.0	250.4	330.5	496.4	349.4	430.2		
414.1	260.8	345.1	517.8	363.4	448.3		
414.1	260.8	345.1	517.8	363.4	448.3		
319.0	198.1	264.6	405.5	279.0	348.6		
343.5	214.2	285.3	434.5	300.7	374.3		
324.5	205.6	271.0	412.0	289.1	356.7		
363.4	239.0	307.4	458.0	334.1	402.2		
338.0	212.4	281.5	428.0	298.2	369.6		
359.2	231.2	301.6	453.0	323.6	394.8		
319.0	198.1	264.6	405.5	279.0	348.6		
343.5	214.2	285.3	434.5	300.7	374.3		
324.5	205.6	271.0	412.0	289.1	356.7		
363.4	239.0	307.4	458.0	334.1	402.2		
338.0	212.4	281.5	428.0	298.2	369.6		
359.2	231.2	301.6	453.0	323.6	394.8		
413.4	278.8	352.8	517.0	387.7	458.8		
430.1	274.6	360.1	536.7	382.0	467.1		
387.7	227.8	315.7	486.6	319.0	411.2		
393.9	236.6	323.1	494.0	330.8	420.6		
405.8	238.5	330.5	508.0	333.4	429.4		
413.7	240.4	335.7	517.3	336.0	435.7		
460.2	264.2	372.0	572.2	368.0	480.3		
405.8	238.5	330.5	508.0	333.4	429.4		
464.1	264.0	374.1	576.8	367.7	482.7		
469.1	267.4	378.3	582.7	372.3	488.0		
464.1	264.0	374.1	576.8	367.7	482.7		
469.1	267.4	378.3	582.7	372.3	488.0		

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EPA_UNRD

| [illegible] | [illegible] | [illegible] |

mined)

To: Good, David[good.david@epa.gov]
Cc: Schmidt, Oliver (EEO)[Oliver.Schmidt@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 7/7/2014 10:34:22 AM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Hi Dave;

I corrected the typos on label index #097. Should be good to go.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, July 03, 2014 5:04 PM
To: Thomas, Richard (EEO)
Cc: Schmidt, Oliver (EEO); Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Attached are the data in Verify as of July 1, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

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Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

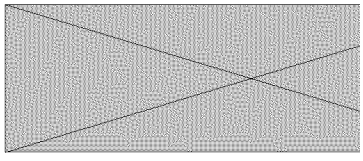
To: Bunker, Byron[bunker.byron@epa.gov]
From: Automotive News
Sent: Mon 7/7/2014 12:45:19 PM
Subject: A.M. NEWSCAST: Subaru's dealer dilemma | Tesla seeks answers after crash, fire | VW, Cadillac and China

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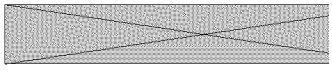
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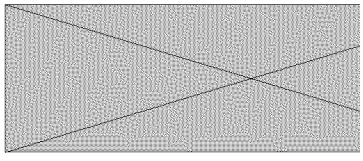
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/7/2014 12:51:28 PM
Subject: A.M. NEWSCAST: Subaru's dealer dilemma | Tesla seeks answers after crash, fire | VW, Cadillac and China

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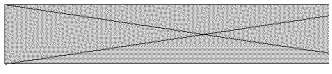
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To: Good, David[good.david@epa.gov]; ross.gatzke@porsche.us[ross.gatzke@porsche.us]
Cc: walter.lewis@porsche.us[walter.lewis@porsche.us]
From: Good, David
Sent: Mon 7/7/2014 1:48:00 PM
Subject: RE: re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014 [Resending a third time with new spreadsheet]
Porsche-rev1_2015 FEGuide-all rel dates-no-sales-7-1-2014.xlsx
2015 (djg) Porsche Panamera Final PHEV Label Calc using EPA template 1-06-14 (incl Canada)-from Ross-1-10-2014.xlsx

Ross,

This is the second resend (third email) with yet another revision to the attached spreadsheet.

Per my voicemail message from Friday, I think the annual fuel cost and 5-year savings for the 2015 Panamera PHEV are also wrong.

Since the cost of premium gasoline changed from $3.75 in 2014 to $3.80, for 2015, my calculations show that the 2015 should have an annual fuel cost of $1900 and a five year savings of $1500.

I attached your 2014 Panamera spreadsheet which I revised to reflect the 2015 fuel costs. My revisions are highlighted in pink filler.

Please let me know if you agree. Thus the Verify errors from column 1 of the 2015 FE Guide spreadsheet for the 2015 Panamera PHEV are as follows:

PHEV; Ross, why are the charge depleting unrounded adjusted city/hwy/comb mpg and kw-hr/100 mi values slightly different from the 2014 values? Annual Fuel Cost error---we calculate $1900; Error in 5-year Savings---we calculate $1500; Error in Charge depleting (electricity) annual fuel cost---please enter $1900 instead of $950; Potential Error in PHEV Composite Rounded Adjusted Combined CO2 value---please enter 206.0 (same as 2014) instead of 229 if appropriate; Please revise Verify as needed.

Dave

From: Good, David
Sent: Thursday, July 03, 2014 6:54 PM
To: 'ross.gatzke@porsche.us'
Cc: 'walter.lewis@porsche.us'
Subject: RE: re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014 [Resending with new spreadsheet]

Ross,

This spreadsheet has the 2015 Panamera PHEV. I included the 2014 Panamera in the spreadsheet for comparison purposes---so you can see the differences in the 2014 & 2015. Errors are as follows:

PHEV; Ross, why are the charge depleting unrounded adjusted city/hwy/comb mpg and kw-hr/100 mi values slightly different from the 2014 values? Error in Charge depleting (electricity) annual fuel cost---please enter $1850 instead of $950; Potential Error in PHEV Composite Rounded Adjusted Combined CO2 value---please enter 206.0 (same as 2014) instead of 229 if appropriate; Please revise Verify as needed.

Dave

From: Good, David
Sent: Thursday, July 03, 2014 5:21 PM
To: 'ross.gatzke@porsche.us'
Cc: 'walter.lewis@porsche.us'
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Ross,

re: 2015 FE Guide - Errors in EPA's data base as of July 1, 2014

Attached are the data in Verify as of July 1, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

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Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comn	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2015 Porsche	Porsche	911 Carrer	PRX	102	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	101	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	110	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	109	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	112	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	111	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	114	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	113	3.8	6
Error: UnrcY		2015 Porsche	Porsche	911 Carrer	PRX	116	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	115	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	104	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	103	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	106	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	105	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	108	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	107	3.8	6
		2015 Porsche	Porsche	911 GT3	PRX	531	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX	542	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX	540	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX	544	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX	543	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX	521	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX	523	3.8	6
		2015 Porsche	Porsche	Boxster	PRX	202	2.7	6
		2015 Porsche	Porsche	Boxster	PRX	201	2.7	6
		2015 Porsche	Porsche	Boxster GT	PRX	224	3.4	6
		2015 Porsche	Porsche	Boxster GT	PRX	223	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX	222	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX	221	3.4	6
		2015 Porsche	Porsche	Cayman	PRX	212	2.7	6
		2015 Porsche	Porsche	Cayman	PRX	211	2.7	6
		2015 Porsche	Porsche	Cayman G	PRX	234	3.4	6
		2015 Porsche	Porsche	Cayman G	PRX	233	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX	232	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX	231	3.4	6
		2015 Porsche	Porsche	Macan S	PRX	311	3.0	6
		2015 Porsche	Porsche	Macan Tur	PRX	321	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	601	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	602	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	616	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	617	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	621	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	611	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	631	4.8	8

	2015 Porsche	Porsche	Panamera PRX	632	4.8	8
	2015 Porsche	Porsche	Panamera PRX	636	4.8	8
	2015 Porsche	Porsche	Panamera PRX	637	4.8	8
PHEV; Rossy	2015 Porsche	Porsche	Panamera PRX	641	3.0	6
PHEV; Rossy	2015 Porsche	Porsche	Panamera PRX	641	3.0	6
PHEV;	2014 Porsche	Porsche	Panamera PRX	641	3.0	6
PHEV;	2014 Porsche	Porsche	Panamera PRX	641	3.0	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	20	28	23				25.5000	39.5000	30.3389
Manual(M	19	27	22				23.7000	38.2000	28.5822
Auto(AM-S	20	28	23				25.4965	38.6494	30.1071
Manual(M	19	27	22				24.0491	37.8468	28.7688
Auto(AM-S	20	27	22				24.9475	37.5494	29.3854
Manual(M	19	26	22				23.5983	36.5997	28.0884
Auto(AM-S	19	26	22				24.1000	36.7000	28.5037
Manual(M	18	26	21				23.1000	36.8000	27.7487
Auto(AM-S	19	26	21				23.3000	36.4000	27.8027
Manual(M	18	26	21				22.8000	36.1000	27.3312
Auto(AM-S	21	28	23				25.9904	39.4499	30.7045
Manual(M	19	27	22				24.0491	37.9499	28.7955
Auto(AM-S	19	27	22				24.5000	37.9000	29.1356
Manual(M	19	27	22				23.8449	37.9484	28.6337
Auto(AM-S	19	27	22				23.9000	38.0000	28.6906
Manual(M	19	27	22				23.6474	37.0494	28.2451
Auto(AM-S	15	20	17				18.2000	28.3000	21.6822
Auto(AM-S	19	26	22				24.1000	36.9000	28.5578
Manual(M	18	26	21				23.0000	36.5000	27.5924
Auto(AM-S	18	25	21				23.1000	35.4000	27.3812
Manual(M	18	26	21				22.5000	35.6000	26.9652
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	22	32	26				27.9000	44.9000	33.6298
Manual(M	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S	21	30	24				26.3000	41.9000	31.5932
Manual(M	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S	22	32	26				27.9000	44.9000	33.6298
Manual(M	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S	21	30	24				26.3000	41.9000	31.5932
Manual(M	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S	17	23	19				21.4471	31.6987	25.1000
Auto(AM-S	17	23	19				20.6947	32.3997	24.7122
Auto(AM-S	18	28	22				22.9368	39.0499	28.1669
Auto(AM-S	18	27	21				22.5783	37.5997	27.5271
Auto(AM-S	17	27	21				21.9036	37.2798	26.8955
Auto(AM-S	17	26	20				21.4891	37.0141	26.4887
Auto(AM-S	16	24	19				19.3871	33.7000	23.9679
Auto(AM-S	17	27	21				21.9036	37.2798	26.8955
Auto(AM-S	15	24	18				19.1667	33.7481	23.7927

Auto(AM-S	15	24	18	18.9742	33.3000	23.5293
Auto(AM-S	15	24	18	19.1667	33.7481	23.7927
Auto(AM-S	15	24	18	18.9742	33.3000	23.5293

2015 Porsche Panamera S E-Hybrid

Auto(AM-S	23	29	25	28.9000	41.1000	33.3595
Auto(AM-S	23	29	25	28.9000	41.1000	33.3595

Is different from the 2014 values? Annual Fuel Cost error---we calculate $1900 for 5 years savings - we calcul

Is different from the 2014 values? Annual Fuel Cost error---we calculate $1900 for 5 years savings - we calcul

2014 Porsche Panamera S E-Hybrid

Auto(AM-S	23	29	25	28.9000	41.1000	33.3557
Auto(AM-S	23	29	25	28.9000	41.1000	33.3557

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
20.2000	28.2000	23.2000		NA	Naturally A	AMS	Automatec		7
18.8000	27.3000	21.9000		NA	Naturally A	M	Manual		7
20.1778	27.6110	22.9592		NA	Naturally A	AMS	Automatec		7
19.1036	27.0590	22.0164		NA	Naturally A	M	Manual		7
19.7713	26.8542	22.4340		NA	Naturally A	AMS	Automatec		7
18.7674	26.1995	21.5137		NA	Naturally A	M	Manual		7
19.1000	26.3000	21.8000		NA	Naturally A	AMS	Automatec		7
18.4000	26.3000	21.2759		NA	Naturally A	M	Manual		7
18.5000	26.1000	21.3000		NA	Naturally A	AMS	Automatec		7
18.2000	25.9000	21.0000		NA	Naturally A	M	Manual		7
20.5425	28.1607	23.3899		NA	Naturally A	AMS	Automatec		7
19.1036	27.1300	22.0375		NA	Naturally A	M	Manual		7
19.4000	27.1000	22.2000		NA	Naturally A	AMS	Automatec		7
18.9514	27.1289	21.9255		NA	Naturally A	M	Manual		7
19.0000	27.2000	22.0000		NA	Naturally A	AMS	Automatec		7
18.8041	26.5097	21.6338		NA	Naturally A	M	Manual		7
14.7000	20.4000	16.8000	G	NA	Naturally A	AMS	Automatec		7
19.1000	26.4000	21.8000		NA	Naturally A	AMS	Automatec		7
18.3000	26.1000	21.1000		NA	Naturally A	M	Manual		7
18.4000	25.4000	21.0000		NA	Naturally A	AMS	Automatec		7
17.9000	25.5000	20.7000		NA	Naturally A	M	Manual		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7
21.9000	31.9000	25.5000		NA	Naturally A	AMS	Automatec		7
20.5000	29.6000	23.8000		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automatec		7
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8000	29.8000	24.1000		NA	Naturally A	AMS	Automatec		7
19.7000	27.5000	22.6000		NA	Naturally A	M	Manual		6
21.9000	31.9000	25.5000		NA	Naturally A	AMS	Automatec		7
20.5000	29.6000	23.8000		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automatec		7
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8000	29.8000	24.1000		NA	Naturally A	AMS	Automatec		7
19.7000	27.5000	22.6000		NA	Naturally A	M	Manual		6
17.1522	22.8013	19.3044		TC	Turbochar	AMS	Automatec		7
16.5830	23.2893	19.0517		TC	Turbochar	AMS	Automatec		7
18.3000	27.9000	21.7000		NA	Naturally A	AMS	Automatec		7
18.0000	26.9000	21.1000		NA	Naturally A	AMS	Automatec		7
17.4965	26.6685	20.7002		TC	Turbochar	AMS	Automatec		7
17.1840	26.4853	20.4094		TC	Turbochar	AMS	Automatec		7
15.5885	24.1929	18.5588		NA	Naturally A	AMS	Automatec		7
17.4965	26.6685	20.7002		TC	Turbochar	AMS	Automatec		7
15.4000	24.2000	18.4000		TC	Turbochar	AMS	Automatec		7

15.3000	23.9000	18.3000	TC	Turbochar¡AMS	Automatec	7
15.4000	24.2000	18.4000	TC	Turbochar¡AMS	Automatec	7
15.3000	23.9000	18.3000	TC	Turbochar¡AMS	Automatec	7

ate $1500; Error in Charges depleting (electricity) annual fuel cost - please enter $1900 instead of $950; Potential E

22.7000	29.3000	25.2605	SC	Supercharj AMS	Automatec	8

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22.7000	29.3000	25.2605	SC	Supercharj AMS	Automatec	8

22.6723	29.2912	25.2387	SC	Supercharj AMS	Automated	8
22.6723	29.2912	25.2387	SC	Supercharj AMS	Automated	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	4-Wheel D	FPRXV04.0	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV02.7	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
N	N	R	2-Wheel D	FPRXV03.4	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXT03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXT03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXV03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXV03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXV03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXV04.8	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FPRXV03.6	10		GP		Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FPRXV04.8	10		GP		Gasoline (F

tomated Manual with paddles)	All Wheel	IFPRXV04.8	10		GP	Gasoline (F
tomated Manual with paddles)	All Wheel	IFPRXV04.8	10		GP	Gasoline (F
tomated Manual with paddles)	All Wheel	IFPRXV04.8	10		GP	Gasoline (F

2015 Porsche Panamera S E-Hybrid

tomated Manual with paddles)	PHEV Combined	2-Wheel	DEPRXV03.0I	10	16	EL	Electricity
tomated Manual with paddles)	PHEV Combined	2-Wheel	DEPRXV03.0I	10	540	GP	Gasoline (F

Adjusted Combined CO2 value---please enter 206.0 (same as 2014) instead of 229

Adjusted Combined CO2 value---please enter 206.0 (same as 2014) instead of 229

2014 Porsche Panamera S E-Hybrid

tomated Manual with paddles)		2-Wheel	DEPRXV03.	10	550	GP	Gasoline (I
tomated Manual with paddles)		2-Wheel	DEPRXV03.	10	550	GP	Gasoline (I

Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	

MPG	miles per gN	Not exempt	108	16
MPG	miles per gN	Not exempt	108	16
MPG	miles per gN	Not exempt	108	16

2015 Porsche Panamera S E-Hybrid

MPG	miles per gN	Not exempt	108	16
MPG	miles per gN	Not exempt	108	16

2014 Porsche Panamera S E-Hybrid

MPG	miles per gN	Not exempt	108	16
MPG	miles per gN	Not exempt	108	16

Annual Fu	EPA Calcı	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2500	2500	911 Carrera A7							
2600	2600	911 Carrera M7							
2500	2500	911 Carrera 4 A7							
2600	2600	911 Carrera 4 M7							
2600	2600	911 Carrera 4 Cabriolet A7							
2600	2600	911 Carrera 4 Cabriolet M7							
2600	2600	911 Carrera 4S A7							
2700	2700	911 Carrera 4S M7							
2700	2700	911 Carrera 4S Cabriolet A7							
2700	2700	911 Carrera 4S Cabriolet M7							
2500	2500	911 Carrera Cabriolet A7							
2600	2600	911 Carrera Cabriolet M7							
2600	2600	911 Carrera S A7							
2600	2600	911 Carrera S M7							
2600	2600	911 Carrera S Cabriolet A7							
2600	2600	911 Carrera S Cabriolet M7							
3350	3350	911 GT3							
2600	2600	911 Targa A7							
2700	2700	911 Targa M7							
2700	2700	911 Targa S A7							
2700	2700	911 Targa S M7							
2850	2850	911 Turbo / Turbo Cabriolet							
2850	2850	911 Turbo S / Turbo S Cabriolet							
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
2600	2600	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2850	2850	Harmonic average of Start/Stop ON and OFF.							
3000	3000	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							

3150	3150 Harmonic average of Start/Stop ON and OFF.				
3150	3150 Harmonic average of Start/Stop ON and OFF.				
3150	3150 Harmonic average of Start/Stop ON and OFF.				
1850	1900 All-Electric	53	51	52	36.9
1850	1900 All-Electric	42	66	50	59.5000
1850	1850 All-Electric	53	51	52	36.9
1850	1850 All-Electric	42	66	50	59.5000

Hwy2 UnaComb2 UrCnty2 UnrHwy2 UnrCmb2 Unr Range2 - Fuel2 Usa Fuel2 Usa Fuel2 Unit Fuel2 Unit

rage of SS ON and SS OFF.
rage of SS ON and SS OFF.

			2015 Porsche Panamera S E-Hybrid					
35.7	36.4	52.8000	51.2000	52.1000	16	EL	Electricity	KW-HR/10 kilowatt-h
94.5000	71.4000	41.6000	66.1000	50.0000	16	EL	Electricity	MPG miles per g
			2014 Porsche Panamera S E-Hybrid					
35.7	36.4	52.7700	50.9383	51.9457	16	EL	Electricity	KW-HR/10 kilowatt-ho
94.5000	71.4000	41.6362	66.1553	49.9705	16	EL	Electricity	MPG miles per g

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	21	Two Seate	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seate	
				SIDI;	2	231	Small SUV 4WD	
				SIDI;	2	231	Small SUV 4WD	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	

	SIDI;	2	26	Large Cars
	SIDI;	2	26	Large Cars
	SIDI;	2	26	Large Cars
				2015 Porsche Pan
100 miles 950	SIDI; PHEV	2	26	Large Cars
	SIDI; PHEV	2	26	Large Cars
				2014 Porsche Pan
00 miles 1850	SIDI; PHE\	2	26	Large Cars
1850	SIDI; PHE\	2	26	Large Cars

MC Car/Truck	Calc Appr	Sales Release D	EPA FE Label	Dataset ID	Unique La	Label Rec	Relabel	Relabel D
car	Derived 5-cycle label	6/23/2014	16317	[redacted]	Y	N		
car	Derived 5-cycle label	6/23/2014	16316		Y	N		
car	Derived 5-cycle label	6/23/2014	16325		N	N		
car	Derived 5-cycle label	6/23/2014	16324		N	N		
car	Derived 5-cycle label	6/23/2014	16327		N	N		
car	Derived 5-cycle label	6/23/2014	16326		Y	N		
car	Derived 5-cycle label	6/23/2014	16329		N	N		
car	Derived 5-cycle label	6/23/2014	16328		Y	N		
car	Derived 5-cycle label	6/23/2014	16411		N	N		
car	Derived 5-cycle label	6/23/2014	16330		N	N		
car	Derived 5-cycle label	6/23/2014	16412		Y	N		
car	Derived 5-cycle label	6/23/2014	16318		Y	N		
car	Derived 5-cycle label	6/23/2014	16321		Y	N		
car	Derived 5-cycle label	6/23/2014	16320		Y	N		
car	Derived 5-cycle label	6/23/2014	16323		Y	N		
car	Derived 5-cycle label	6/23/2014	16322		Y	N		
car	Derived 5-cycle label	6/23/2014	16341		N	N		
car	Derived 5-cycle label	6/23/2014	16342		Y	N		
car	Derived 5-cycle label	6/23/2014	16391		Y	N		
car	Derived 5-cycle label	6/23/2014	16344		N	N		
car	Derived 5-cycle label	6/23/2014	16343		Y	N		
car	Derived 5-cycle label	6/23/2014	16337		N	N		
car	Derived 5-cycle label	6/23/2014	16338		N	N		
car	Derived 5-cycle label	6/23/2014	16231		N	N		
car	Derived 5-cycle label	6/23/2014	16229		N	N		
car	Derived 5-cycle label	6/23/2014	16250		Y	N		
car	Derived 5-cycle label	6/23/2014	16248		Y	N		
car	Derived 5-cycle label	6/23/2014	16238		Y	N		
car	Derived 5-cycle label	6/23/2014	16236		Y	N		
car	Derived 5-cycle label	6/23/2014	16232		N	N		
car	Derived 5-cycle label	6/23/2014	16230		N	N		
car	Derived 5-cycle label	6/23/2014	16251		Y	N		
car	Derived 5-cycle label	6/23/2014	16249		Y	N		
car	Derived 5-cycle label	6/23/2014	16239		Y	N		
car	Derived 5-cycle label	6/23/2014	16237		Y	N		
	Derived 5-cycle label	5/9/2014	15889		N	N		
	Derived 5-cycle label	5/9/2014	15890		N	N		
car	Derived 5-cycle label	6/16/2014	16105			N		
car	Derived 5-cycle label	6/16/2014	16107			N		
car	Derived 5-cycle label	6/16/2014	16110			N		
car	Derived 5-cycle label	6/16/2014	16111			N		
car	Derived 5-cycle label	6/16/2014	16112			N		
car	Derived 5-cycle label	6/16/2014	16109			N		
car	Derived 5-cycle label	6/9/2014	16039			N		

car	Derived 5-cycle label	6/9/2014	16040		N
car	Derived 5-cycle label	6/9/2014	16041		N
car	Derived 5-cycle label	6/9/2014	16042		N
amera S E-Hybrid					
car	Plug-in Hybrid Label	7/3/2014	16420	Y	N
car	Plug-in Hybrid Label	7/3/2014	16420	Y	N
amera S E-Hybrid					
car	Plug-in Hybrid Label	2/21/2014	15566	Y	N
car	Plug-in Hybrid Label	2/21/2014	15566	Y	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N		N	Y	Porsche V\Y			Porsche V\	

N	N	N	Y	Porsche V\Y	Porsche V\
N	N	N	Y	Porsche V\Y	Porsche V\
N	N	N	Y	Porsche V\Y	Porsche V\
			2015 Porsche Panamera S E-Hybrid		
N	N	N	Y	Porsche V\Y	Porsche V\Battery(s)
N	N	N	Y	Porsche V\Y	Porsche V\Battery(s)
			2014 Porsche Panamera S E-Hybrid		
N	N	N	Y	Porsche V'Y	Porsche V'Battery(s)
N	N	N	Y	Porsche V'Y	Porsche V'Battery(s)

evice Desc	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit

1	Lithium Ior	471	75.00	67.1 Both On-B
1	Lithium Ior	471	75.00	67.1 Both On-B
1	Lithium Ior	471	75.00	67.1 Both On-B
1	Lithium Ior	471	75.00	67.1 Both On-B

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C#	Drive M(	Motor Ger

	2015 Porsche Panamera S E-Hybrid		
Electrical R	Both	N	1 DC Brushle
Electrical R	Both	N	1 DC Brushle
	2014 Porsche Panamera S E-Hybrid		
Electrical F	Both	N	1 DC Brushle
Electrical F	Both	N	1 DC Brushle

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40

	GDI	Spark Ignit		N	0W40
	GDI	Spark Ignit		N	0W40
	GDI	Spark Ignit		N	0W40
					2015 Porsche Pan
70	GDI	Spark Ignit N	Y	N	0W40
70	GDI	Spark Ignit N	Y	N	0W40
					2014 Porsche Pan
70	GDI	Spark Ignit N	Y	N	0W40
70	GDI	Spark Ignit N	Y	N	0W40

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Boxster GT					
N	No	Auto(AM-S	Auto(AM-S	Boxster S					
N	No	Manual(M	Manual(M	Boxster S					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Cayman G					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Cayman S					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					

Y	Yes	Auto(AM-SAuto(AM-SPanamera			
Y	Yes	Auto(AM-SAuto(AM-SPanamera			
Y	Yes	Auto(AM-SAuto(AM-SPanamera			
amera S E-Hybrid					
Y	Yes	Auto(AM-SAuto(AM-S	CD-2C	Charge De|CS-2C	Charge Sustaining 2-cycle
Y	Yes	Auto(AM-SAuto(AM-S	CD-2C	Charge De|CS-2C	Charge Sustaining 2-cycle
amera S E-Hybrid					
Y	Yes	Auto(AM-SAuto(AM-S	CD-2C	Charge DeCS-2C	Charge Sustaining 2-cycle
Y	Yes	Auto(AM-SAuto(AM-S	CD-2C	Charge DeCS-2C	Charge Sustaining 2-cycle

[redacted]	EPA Calculated Gas G	[redacted]	[redacted] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
30.5	[redacted]	5	5	FPRXV04.0	5		
28.8	[redacted]	5	5	FPRXV04.0	5		
30.1	[redacted]	5	5	FPRXV04.0	5		
28.9	[redacted]	5	5	FPRXV04.0	5		
29.5	[redacted]	5	5	FPRXV04.0	5		
28.2	[redacted]	5	5	FPRXV04.0	5		
28.8	[redacted]	5	5	FPRXV04.0	5		
28.0	[redacted]	5	5	FPRXV04.0	5		
28.0	[redacted]	5	5	FPRXV04.0	5		
27.6	[redacted]	5	5	FPRXV04.0	5		
30.6	[redacted]	5	5	FPRXV04.0	5		
28.9	[redacted]	5	5	FPRXV04.0	5		
29.4	[redacted]	5	5	FPRXV04.0	5		
28.6	[redacted]	5	5	FPRXV04.0	5		
28.9	[redacted]	5	5	FPRXV04.0	5		
28.3	[redacted]	5	5	FPRXV04.0	5		
21.8	[redacted]	4	4	FPRXV04.0	5		
29.4	[redacted]	5	5	FPRXV04.0	5		
28.2	[redacted]	5	5	FPRXV04.0	5		
27.5	[redacted]	5	5	FPRXV04.0	5		
27.1	[redacted]	5	5	FPRXV04.0	5		
27.0	[redacted]	5	5	FPRXV04.0	5		
27.0	[redacted]	5	5	FPRXV04.0	5		
33.9	[redacted]	6	6	FPRXV02.7	5		
31.4	[redacted]	6	6	FPRXV02.7	5		
32.8	[redacted]	6	6	FPRXV03.4	5		
29.0	[redacted]	5	5	FPRXV03.4	5		
31.8	[redacted]	6	6	FPRXV03.4	5		
31.8	[redacted]	5	5	FPRXV03.4	5		
33.9	[redacted]	6	6	FPRXV02.7	5		
31.4	[redacted]	6	6	FPRXV02.7	5		
32.8	[redacted]	6	6	FPRXV03.4	5		
29.0	[redacted]	5	5	FPRXV03.4	5		
31.8	[redacted]	6	6	FPRXV03.4	5		
31.8	[redacted]	5	5	FPRXV03.4	5		
	[redacted]	4	4	FPRXT03.6	5		
	[redacted]	4	4	FPRXT03.6	5		
28.4	[redacted]	5	5	FPRXV03.6	5		
27.7	[redacted]	5	5	FPRXV03.6	5		
27.1	[redacted]	5	5	FPRXV03.6	5		
26.7	[redacted]	5	5	FPRXV03.6	5		
24.1	[redacted]	4	4	FPRXV04.8	5		
27.1	[redacted]	5	5	FPRXV03.6	5		
24.0	[redacted]	4	4	FPRXV04.8	5		

23.7	[redacted]	4	4 FPRXV04.8	5
24.0		4	4 FPRXV04.8	5
23.7		4	4 FPRXV04.8	5
	[redacted]	2015 Porsche Panamera S E-Hybrid		
31.4		8	9 FPRXJ03.0I	5
31.4		8	9 FPRXJ03.0I	5
		2014 Porsche Panamera S E-Hybrid		
		8	9 EPRXV03.	5
31.4		8	9 EPRXV03.	5

| | | |

2015 Porsche Pan

2014 Porsche Pan

[illegible]	$ You Save	$ You Spend	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		1500	441	315	384			
		2000	473	326	407			
		1500	440	322	387			
		2000	466	329	404			
		2000	449	331	396			
		2000	473	340	413			
		2000	462	338	406			
		2500	482	336	416			
		2500	480	341	417			
		2500	487	344	423			
		1500	433	315	380			
		2000	465	328	404			
		2000	455	328	398			
		2000	469	328	406			
		2000	468	328	405			
		2000	472	335	410			
		5750	606	434	529			
		2000	464	337	407			
		2500	485	341	420			
		2500	483	350	423			
		2500	496	349	430			
		3250	518	363	448			
		3250	518	363	448			
0			406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
0			406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
		4000	517	388	459			
		4000	537	382	467			
		2000	487	319	411			
		2500	494	331	421			
		2500	508	333	429			
		3250	517	336	436			
		4000	572	368	480			
		2500	508	333	429			
		4750	577	368	483			

		4750	583	372	488
		4750	577	368	483
		4750	583	372	488
amera S E-Hybrid					
	1750		74	0	41
	1750		392	303	352
amera S E-Hybrid					
	2250		74	0	41
	2250		392	303	352

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char
349.3	224.8	293.3	441.3	314.9	384.4
375.9	233.1	311.6	472.7	326.1	406.7
348.5	229.9	295.1	440.4	321.8	387.0
370.1	235.0	309.3	465.9	328.7	404.2
355.9	237.0	302.4	449.1	331.4	396.1
376.4	243.1	316.4	473.3	339.6	413.1
367.1	241.7	310.7	462.3	337.7	406.2
383.6	240.5	319.2	481.8	336.1	416.2
382.2	243.8	319.9	480.1	340.5	417.3
388.2	246.5	324.4	487.2	344.2	422.8
342.0	225.2	289.4	432.7	315.5	380.0
369.6	234.6	308.8	465.3	328.1	403.6
361.0	234.3	304.0	455.1	327.7	397.8
372.8	234.8	310.7	469.1	328.4	405.8
372.2	234.2	310.1	468.3	327.6	405.0
375.4	239.8	314.4	472.1	335.1	410.4
488.4	313.5	409.7	605.5	434.4	528.5
368.9	240.9	311.3	464.4	336.6	406.9
386.4	243.9	322.3	485.1	340.7	420.1
384.9	251.1	324.7	483.3	350.4	423.5
396.0	250.4	330.5	496.4	349.4	430.2
414.1	260.8	345.1	517.8	363.4	448.3
414.1	260.8	345.1	517.8	363.4	448.3
319.0	198.1	264.6	405.5	279.0	348.6
343.5	214.2	285.3	434.5	300.7	374.3
324.5	205.6	271.0	412.0	289.1	356.7
363.4	239.0	307.4	458.0	334.1	402.2
338.0	212.4	281.5	428.0	298.2	369.6
359.2	231.2	301.6	453.0	323.6	394.8
319.0	198.1	264.6	405.5	279.0	348.6
343.5	214.2	285.3	434.5	300.7	374.3
324.5	205.6	271.0	412.0	289.1	356.7
363.4	239.0	307.4	458.0	334.1	402.2
338.0	212.4	281.5	428.0	298.2	369.6
359.2	231.2	301.6	453.0	323.6	394.8
413.4	278.8	352.8	517.0	387.7	458.8
430.1	274.6	360.1	536.7	382.0	467.1
387.7	227.8	315.7	486.6	319.0	411.2
393.9	236.6	323.1	494.0	330.8	420.6
405.8	238.5	330.5	508.0	333.4	429.4
413.7	240.4	335.7	517.3	336.0	435.7
460.2	264.2	372.0	572.2	368.0	480.3
405.8	238.5	330.5	508.0	333.4	429.4
464.1	264.0	374.1	576.8	367.7	482.7

469.1	267.4	378.3	582.7	372.3	488.0			
464.1	264.0	374.1	576.8	367.7	482.7			
469.1	267.4	378.3	582.7	372.3	488.0			
					2015 Porsche Panamera S E-Hybrid			
51.7	0	28.5	73.9	0	40.7	229.0	3.0	540
307.0	216.2	266.4	391.9	303.0	351.9	229.0	3.0	540
					2014 Porsche Panamera S E-Hybrid			
51.7	0	28.5	73.9	0	40.7	206.0	3	540
307.4	216.2	266.4	391.9	303.4	352.1	206.0	3	540

[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
N	4.3	4.3			
N	4.5	4.5			
N	4.3	4.3			
N	4.5	4.5			
N	4.5	4.5			
N	4.5	4.5			
N	4.5	4.5			
N	4.8	4.8			
N	4.8	4.8			
N	4.8	4.8			
N	4.3	4.3			
N	4.5	4.5			
N	4.5	4.5			
N	4.5	4.5			
N	4.5	4.5			
N	4.5	4.5			
N	5.9	5.9			
N	4.5	4.5			
N	4.8	4.8			
N	4.8	4.8			
N	4.8	4.8			
N	5.0	5.0			
N	5.0	5.0			
N	3.8	3.8			
N	4.2	4.2			
N	4.0	4.0			
N	4.5	4.5			
N	4.2	4.2			
N	4.3	4.3			
N	3.8	3.8			
N	4.2	4.2			
N	4.0	4.0			
N	4.5	4.5			
N	4.2	4.2			
N	4.3	4.3			
N	5.3	5.3			
N	5.3	5.3			
N	4.5	4.5			
N	4.8	4.8			
N	4.8	4.8			
N	5.0	5.0			
N	5.3	5.3			
N	4.8	4.8			
N	5.6	5.6			

		N	5.6	5.6
		N	5.6	5.6
		N	5.6	5.6
28	36	31N	0.5	0.5
28	36	31N	4.0	4.0
28	36	31N	0.5	0.5
28	36	31N	4.0	4.0

EPA_UNRD

2015 Porsche Panamera S E-Hybrid

2014 Porsche Panamera S E-Hybrid

| [redacted] | [redacted] | [redacted] |

Mr Ross Gatzke
Mr Ross Gatzke
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Mr Ross Gatzke

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Porsche PHEV CD-FE results (EPA Confirmatory Data)

						EPA Data		Canada				
						City-CD	HWY-CD					
	No	Long Name		Calculation	unit	Conf 00	Conf 00	FCG value	Units			
Test Results	(1)	Transition cycle	n	-		4	3					
	(2)	The cycle of 1st Engine start		-		1	3					
	(3)	Phase included Transition cycle		-		1	1					
	(4)	Recharge Event Energy (kiloWatt-hours)		-	kW•h	8.4530	7.9730					
	(5)	**Rcda** Charge Depleting Range (Actual miles)		-	mile	22.876	22.342					
	(6)	SOCst	@n-1	-	%	34.180	53.586					
	(7)	SOCend		-	%	2.140	8.131					
	(8)	SOCst.	@n	-	%	2.140	8.131					
	(9)	SOCend		-	%	0.000	-0.083					
	(10)	Distance	@Phase1(@n-3)	-	mile	7.447	-					
	(11)	Fuel Economy		-	mpg	99.730	-					
	(12)	Distance	@Phase2(@n-2)	-	mile	7.466	10.258					
	(13)	Fuel Economy		-	mpg	21855.900	227796.509					
	(14)	Distance	@Phase3(@n-1)	-	mile	7.4640	10.249					
	(15)	Fuel Economy		-	mpg	135.280	10831844.220					
	(16)	Distance	@Phase4(@n)	-	mile	7.4670	10.256					
	(17)	Fuel Economy		-	mpg	35.070	43.320					
FE Calculation (CD) Electricity	(A)	ECcd		=(4) / (5)	kW-h/mile	0.36951	0.35686				0.52788	0.50980
	(B)	MPGe	505	=33.705 / (A)	MPGe	91.21443	94.44840				0.51974	
Gasoline	(C)	ΔSOC	@n-1	=(6) - (7)	%	32.040	45.455					
	(D)	ΔSOC	@n	=(8) - (9)	%	2.140	8.214					
	(E)	Zn		=(D) / (C)		0.06679	0.18071					
	(F)	Yn-1		=(14) / (15)	gal	0.05517	0.0000009462					
	(G)	SIGMA Yi(i=1 to n-1)		=((10) / (11) + (12) / (13)) + (F)	gal	0.13019	0.000045978					
	(H)	MPG		=(5) / ((G) + (E) x (16) / (17))	MPG	158.41149	521.66652				230.702	310.888	0485.16656	61.49161
Combine (MPGe and MPG)	(J)	Combine MPGe and MPG		= 1 / ((1 / (B)) + (1 / (H)))	MPGe	57.88427	79.96977				66.09890	
	(L)	derived 5cycle adjustment (70% cap)		=K (City) * 0.7 =K (HWY) * 0.7	MPGe	40.51899	55.97884	**5.9**	**4.2**	Le / 100 km		
Combine City / Hwy	(M)	Combined FE (CD)		=1/((0.55/CityMPG)+(0.45/HwyMPG))	MPGe	**46.26923**		**5.1**		Le / 100 km		
Fuel Consumption Rate (CD) Electricity	(N)	Conf. Results		= (A)	kW-h/mile	0.36951	0.35686					
	(O)	Convert to kW-h/100miles		=(N)*100	W-h/100mile	36.95139	35.68615					
	(P)	Derived 5cycle adjustment (70% cap)		=(O)/0.7	W-h/100mile	52.78770	50.98022					
	(Q)	Combined City and Hwy		=0.55*(P)City+0.45*(P)Hwy	W-h/100mile	**51.97433**		**32.3**		kW-h / 100 km		
Gasoline	(R)	Conf. Results		= (H)	mpg	158.41149	521.66652					
	(S)	Derived 5cycle adjustment (70% cap)		=(R)*0.7	mpg	110.88804	365.16656	2.1	0.6	L / 100 km		
	(T)	Combined City and Hwy		=1/((0.55/CityMPG)+(0.45/HwyMPG))	mpg	161.49161						
	(U)	Gasoline consumption rate		=100/(T)	gal/100miles	**0.61923**		**1.4**		L / 100 km		
FE Rating Utilitized Composite FE		CS FE		= (AI)		22.7	29.3	**10.4**	**8.0**	L / 100 km		
		CD MPGe				40.5	56					
		Composite MPGe		= UF*(CD) + (1-UF)*(CS)		27.41082	35.87402					
		Combined Composite FE for Rating		=1/((0.55/CityMPG)+(0.45/HwyMPG))	MPGe	**30.66641**						
Driving Range Rcda	(V)	Rcda		= (5)	miles	22.876	22.342					
	(W)	Derived 5cycle adjustment		=(V)*0.7	miles	16.0132	15.6394					
	(X)	Combined City and Hwy Range		=0.55*(W)City+0.45*(W)Hwy	miles	**15.84499**		**25.74831**		km		
All Electric Range	(Y)	Distance before engine starts		Calculated from Techstream data	miles	19.295	23.981					
	(AA)	Derived 5cycle adjustment		=(Y)*0.7	miles	13.5065	16.7867					
	(AB)	Combined City and Hwy		=0.55*(AA)City+0.45*(AA)Hwy	miles	**14.98259**		**24.13904**		km		
Fuel Cost of CD mode Electricity	(AC)	Convert elec consumption to miles/kW-h		=1/(N)	miles/kW-h	2.70626	2.80221					
	(AD)	Derived 5cycle adjustment (70% cap)		=(AC)*0.7	miles/kW-h	1.89438	1.96155					
	(AE)	Electricity cost		=$0.12/(AD)	$/mile	0.06335	0.06118	0.03936	0.03801	$/km		
Gasoline	(AF)	Gasoline cost		=$3.75/(S)	$/mile	0.03382	0.01027	0.03012	0.00915	$/km		
Electricity + Gasoline	(AG)	Total cost		=(AE)+(AF)	$/mile	0.09716	0.07145	0.06948	0.04716	$/km		
Fuel Cost of CS mode Gasoline	(AH)	Fuel economy value		Calculated from CS mode tests	mpg	28.872	41.08					
	(AI)	Derived 5cycle adjustment		=(AH)*(5-Cycle Derivation)	mpg	22.7	29.3	**10.4**	**8.0**	L / 100 km		
	(AJ)	Gasoline cost	(Premium)	=$3.80/(AH)	$/mile	0.16740	0.12969	0.14715	0.11400	$/km		
Annual fuel cost UF	(AK)	MDIUF		Calculated in "UF" sheet		0.39103	0.38435	0.39103	0.38435			
CD CS composite	(AL)	CD and CS composite		=(AG)*UF+(AJ)*(1-UF)	$/mile	0.13994	0.10731	0.11678	0.08831	$/km		
Combined City and Hwy	(AM)	Combined City and Hwy		=(0.55*(AL)City+0.45*(AL)Hwy)*15000	$/year	1878.78238		**2079**		$/year		
Annual Cost	(AN)	Rounding to the nearest $50		=round(Annual fuel cost/50,0)*50	$/year	**1900**				$/year		
Ave. Veh FC L / 100 km								**10.1**				
Ave. Veh Cost/Year								**2626**		$/year		
Savings		5year fuel saving		=11000-(AM)*5	$ / 5 yrs	**1500**		**2735**		$		
Gasoline only FE/FC CS MPG	(AO)	CS MPG (5-Cycle Adj)		=(AI)	MPG	22.7	29.3	10.4	8	L / 100 km	5.26054	
Combined City/Hwy FE	(AP)	Combined City and Hwy FE		=1/((0.55/CityMPG)+(0.45/HwyMPG))	MPG	**25.26054**						
Combined City/Hwy FC		Combined City and Hwy FC		=1/MPG	gal / 100 mi	**3.95874**		**9.3**		L / 100 km		
Blended driving range Total tank capacity	(AQ)	Gallons			gal	21.14		80		L		
CD gallons	(AR)	Gallons used in CD Mode		= (W) / (H)	gal	0.10109	0.02998			L		
CS gallons	(AS)	Combined Gallons used in CD Mode		=0.55*(AR)City + 0.45*(AR)Hwy	gal	0.06909				L		
Combined City/Hwy FE	(AT)	Gallons used in CS Mode		=(AQ) - (AS)	gal	21.07091				L		
Combined City/Hwy FC	(AU)	mposite Gasoline+Electricity Driving range		=Rcda + (AT) / (.55/(AH)city + .45/(AH	miles	**550**		**885.09817**		km		
CREE Combined City/Hwy CREE	(AW)	Composite Utilitized CREE (CD and CS)		From CO2 utility factor calc	g/mile	307.4	216.2	191.01836	134.34668	g / km	266.36	
	(AY)	Combined City and Hwy CREE		=0.55*CityCREE+0.45*HwyCREE	g/mile	**266.36**		**3310.32208**		kg / year		
CO2 Rating Utilitized Combined CREE	(AZ)	CD CO2			g/mile	55.847	16.999	34.70333	10.56318	CD g / km	38.3654	
	(BA)	5-cycle CS CO2			g/mile	391.89	303.4	243.52045	188.53276	CS g / km	252.0695	
	(BB)	Composite CO2		=(AZ)*UF+(BA)*(1-UF)	g/mile	260.48720	193.32155	694.06652	211.26357	CD kg / year	30.26266	
	(BC)	5-Cycle Adjustment (for Verify only)		(BB)/0.7	g/mile			**477**		Comb CD kg / y	0	
	(BD)	Combined Composite CO2 for Rating		=0.55*CityCREE+0.45*HwyCREE	g/mile	**230.26266**		4870.40892	3770.6552	CS kg / year		
								4376		Comb CS kg / yr		
								3237.33494	2402.60027	Comp kg / yr		
								2862		Comp kg / yr		
	(BE)	Le / 100 km		(UF)*(CD Le) + (1-UF)*(CS Le)				**8.6**	**6.5**	Le / 100 km		
	(BF)	Comb Le / 100 km		=0.55*City + 0.45*Hwy				**7.7**		Le / 100 km		

Canada

Annual Cost (CD) **1188.79190**

Annual Cost (CS) **2644.59242**

36.38203

5-Cycle

79.7814324.2842954.80771

		(BG)	Comb Le / Year		= (BF) * 200				1540		Le / year

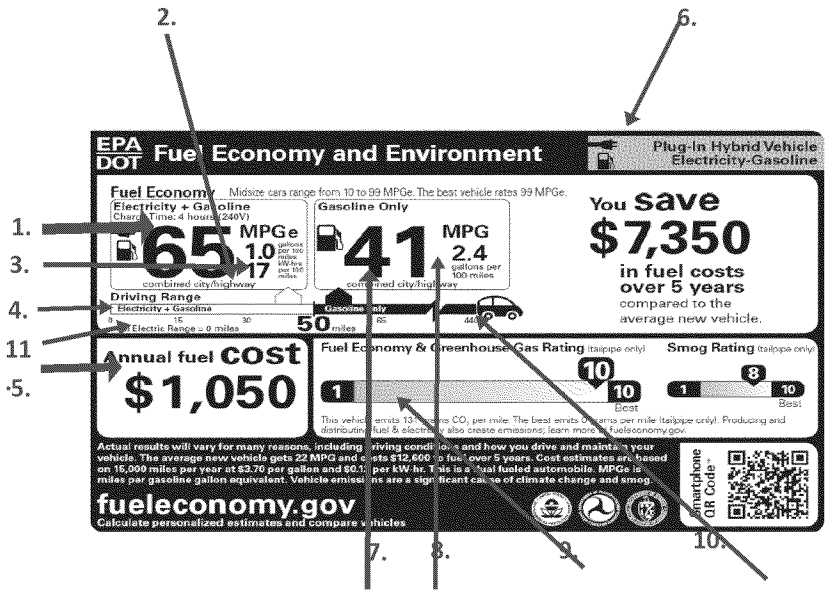

2.
6.
EPA DOT Fuel Economy and Environment
Plug-In Hybrid Vehicle Electricity-Gasoline
Fuel Economy
Midsize cars range from 10 to 99 MPGe. The best vehicle rates 99 MPGe.
Electricity + Gasoline
Charge Time: 4 hours (240V)
65 MPGe
1.0 gallons per 100 miles
17 kW-hrs per 100 miles
combined city/highway
Gasoline Only
41 MPG
2.4 gallons per 100 miles
combined city/highway
You save $7,350 in fuel costs over 5 years compared to the average new vehicle.
Driving Range
Electricity + Gasoline
Electric Range = 0 miles
50 miles
Gasoline only
1.
3.
4.
11
5.
Annual fuel cost
$1,050
Fuel Economy & Greenhouse Gas Rating (tailpipe only)
10
Best
Smog Rating (tailpipe only)
8
Best
This vehicle emits 13 grams CO2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel & electricity also create emissions; learn more at fueleconomy.gov.
Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 22 MPG and costs $12,600 in fuel over 5 years. Cost estimates are based on 15,000 miles per year at $2.70 per gallon and $0.11 per kW-hr. This is a dual fueled automobile. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.
fueleconomy.gov
Calculate personalized estimates and compare vehicles
Smartphone QR Code*
7.
8.
9.
10.

TABLE 5 OF § 600.116–12—CITY/HIGHWAY SPECIFIC UTILITY FACTOR COEFFICIENTS

EPA

	FUF		MDIUF	City		Hwy	
	Coefficients for City	Coefficients for Hwy	City/Hwy	Rcda	MDIUF City	Rcda	MDIUF Hwy
1	14.86	4.8	13.10	16.0132	0.5257466667	15.6394	0.5134740351
2	2.965	13	-18.70	16.0132	-0.0301197991	15.6394	-0.0287300241
3	-84.05	-65	5.22	16.0132	0.0003374319	15.6394	0.0003143490
4	153.7	120	8.15	16.0132	0.0000211436	15.6394	0.0000192374
5	-43.59	-100	3.53	16.0132	0.0000003675	15.6394	0.0000003266
6	-96.94	31	-1.34	16.0132	-0.0000000056	15.6394	-0.0000000049
7	14.47		-4.01	16.0132	-0.0000000007	15.6394	-0.0000000006
8	91.7		-3.90	16.0132	0.0000000000	15.6394	0.0000000000
9	-46.36		-1.15	16.0132	0.0000000000	15.6394	0.0000000000
10			3.88	16.0132	0.0000000000	15.6394	0.0000000000
Normarized Distance	399	399	399	UF (cumulative)	0.391029714243057	UF (cumulative)	0.384350775592708

MZU

	FUF		MDIUF	City		Hwy	
	Coefficients for City	Coefficients for Hwy	City/Hwy	Rcda	MDIUF City	Rcda	MDIUF Hwy
1	14.86	4.8	13.10	0	0.0000000000	0	0.0000000000
2	2.965	13	-18.70	0	0.0000000000	0	0.0000000000
3	-84.05	-65	5.22	0	0.0000000000	0	0.0000000000
4	153.7	120	8.15	0	0.0000000000	0	0.0000000000
5	-43.59	-100	3.53	0	0.0000000000	0	0.0000000000
6	-96.94	31	-1.34	0	0.0000000000	0	0.0000000000
7	14.47		-4.01	0	0.0000000000	0	0.0000000000
8	91.7		-3.90	0	0.0000000000	0	0.0000000000
9	-46.36		-1.15	0	0.0000000000	0	0.0000000000
10			3.88	0	0.0000000000	0	0.0000000000
Normarized Distance	399	399	399	UF (cumulative)	0.000000000000000	UF (cumulative)	0.000000000000000

NHV

A-h (meas)	Cycle A-h	Cum. A-h (calc)	Ave Voltage (meas)	NEC	TFE
-2.27	-5.295	-5.295	371	-1964.445	
-3.025					
-3.238	-6.222	-11.517	371	-2308.362	
-2.984					
-3.392	-5.606	-17.123	371	-2079.826	
-2.214					
0.452	-0.375	-17.498	371	-139.125	
-0.827					

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Mon 7/7/2014 2:28:37 PM
Subject: RE: VW Tests

Good morning Bill,

I have not received any results from the lab. I'll forward them as soon as I get them.

Thanks,

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, July 07, 2014 9:21 AM
To: Mazaitis, Vincent
Subject: VW Tests

Hello Vince,

I left a voice mail for Jim Snyder but thought I would also send a reminder to you regarding the test results pending for two vehicles tested late last week. Any follow up you can do would be appreciated.

VID: 370-50379/15 (Golf diesel)

VID: FAPA-RAF (Golf 1.8L gas)

Thanks,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Ex. 7
From: Snyder, Jim
Sent: Mon 7/7/2014 2:57:50 PM
Subject: RE: VW Group - Golf 2.0L TDI Manual Supplemental Information

Ex. 7 I will remind Ben no t to schedule the testing for before then. Do you know if those are new shift schedules or have they been previously used by the lab? I have to follow up on them with the lab if they haven't been used in their system before.

Jim

From: Ex. 7 @vw.com]
Sent: Thursday, July 03, 2014 10:12 AM
To: Snyder, Jim
Cc: Ex. 7
Ex. 7
Subject: VW Group - Golf 2.0L TDI Manual Supplemental Information

Hello Jim,

Today we sent the supplemental information for the Golf diesel with manual transmission which was selected for FTP / Hwy confirmatory testing.

Please note that due to logistical issues, the earliest availability date for this vehicle has changed to **July 28th**. We are letting you know since we are unable to correct the original date sent in the decision information data set.

Please advise with the actual test date when it is set.

Regards

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax:

mailto:

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7 vw.com]
From: Ex. 7
Sent: Mon 7/7/2014 3:04:46 PM
Subject: RE: VW Group - Golf 2.0L TDI Ex. 7

Hello Jim,

Thanks for the quick reply.

Yes, these are Ex. 7 and as far as we could tell from looking at the old files, have not used before in previous concepts.

On a related note, in order to consolidate the Ex. 7 ve recently loaded some of the Ex. 7 (but only where the data and index matched between mfr codes). The remaining we will probably load to VGA on an as needed basis.

Regards,

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, July 07, 2014 10:58 AM
To: Ex. 7
Subject: RE: VW Group - Golf 2.0L TDI Ex. 7

Mike , I will remind Ben no t to schedule the testing for before then. Do you know if those are new shift schedules or have they been previously used by the lab? I have to follow up on them with the lab if they haven't been used in their system before.

Jim

From: Ex. 7 @vw.com]
Sent: Thursday, July 03, 2014 10:12 AM
To: Snyder, Jim
Cc: Ex. 7
Ex. 7
Subject: VW Group - Golf 2.0L TD Ex. 7 upplemental Information

Hello Jim,

Today we sent the supplemental information for the Golf diese Ex. 7 which was selected for FTP / Hwy confirmatory testing.

Please note that due to logistical issues, the earliest availability date for this vehicle has changed to **July 28th**. We are letting you know since we are unable to correct the original date sent in the decision information data set.

Please advise with the actual test date when it is set.

Regards

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

Fax:

mailto:

Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]; Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Schlueter, Hannah (EASZ/1)[hannah.schlueter@volkswagen.de]
From: Giles, Michael (EEO)
Sent: Mon 7/7/2014 7:04:30 PM
Subject: VW - Test Status Request

Hello Jim and Vince,

This is a follow up to my voice message with Jim. As you are aware, we are anxiously awaiting the test results from the Jetta TDI.

Is it possible to check the status for us or provide a preliminary report? If the data is not ready yet, is it possible to provide indication if a re-test may be needed (within 3% and emissions standards)?

This would help greatly with in allocating our engineering resources for the week.

Thanks,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

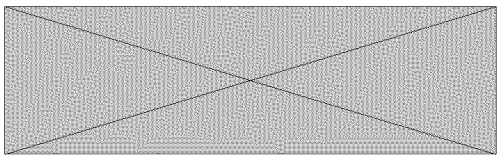
mailto: Michael.Giles@VW.com

To: Bunker, Byron[bunker.byron@epa.gov]
From: Automotive News
Sent: Mon 7/7/2014 7:47:15 PM
Subject: P.M. NEWSCAST: Halftime sales highlights: Steep climb by Jeep, Mitsubishi; Audi makes a pass | 'Disturbing' loan trend | Why these Hyundai drivers are bailing

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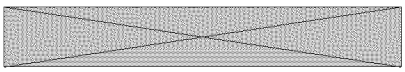
July 7, 2014



Halftime sales highlights »

A steep climb by Jeep »

Hyundai driving stunt »



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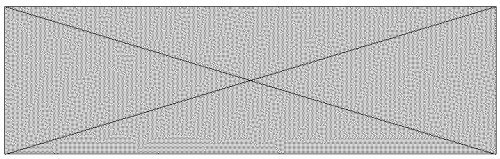
. .

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/7/2014 7:48:42 PM
Subject: P.M. NEWSCAST: Halftime sales highlights: Steep climb by Jeep, Mitsubishi; Audi makes a pass | 'Disturbing' loan trend | Why these Hyundai drivers are bailing

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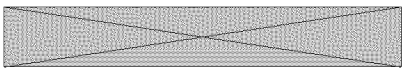
July 7, 2014



Halftime sales highlights »

A steep climb by Jeep »

Hyundai driving stunt »



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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7 @volkswagen.de]; Ex. 7 Ex. 7 vw.com]; Ex. 7 @vw.com]; Ex. 7 Ex. 7 @vw.com]; Ex. 7
From: Ex. 7
Sent: Mon 7/7/2014 8:39:52 PM
Subject: VW Group - A few Questions for BEV /PHEV Testing

Hello Jim,

In preparation for testing of the e-Golf, we had a some general questions which I am forwarding along.

- How does EPA measure kWh during the test?

- Do we need to bring any measurement device for this step?

- Is there planned a standardization for the charger at EPA?

- For a PHEV, how are measurements made when the engine is running?

- Is it possible to share any test data XML for a BEV and or PHEV which we could use as a reference?

Any feedback or direction you can give relating to these questions below would be appreciated. If clarification on any of the questions is needed we could discuss by phone.

Thanks,

Ex. 7

Regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax: Ex. 7

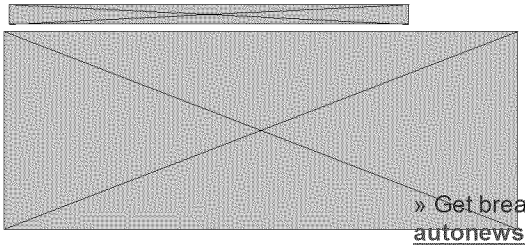
mailto: Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/7/2014 8:47:25 PM
Subject: DAILY: Detroit 3 to shorten, eliminate summer break at some plants | Kia confirms interest in Mexico | Chevy's Manchester United ad launched | Price-fixing crackdown jolts Japan's business culture

Today's most read story

A super SAAR and signs of a stellar second half

July 7, 2014



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TOP NEWS

Detroit 3 to shorten, eliminate summer break at some plants

3:45 pm U.S. ET | Jul 7

Summer vacation will be shortened or won't come at all for some Detroit 3 assembly plants in the United States as light truck and SUV sales continue to heat up. ...

» READ

Kia confirms interest in Mexico assembly plant

3:37 pm U.S. ET | Jul 7

Kia has confirmed that it's considering putting its next overseas assembly plant in Mexico. A statement from the company last week was its first official acknowledgement that it's interested in a Mexican assembly plant, following several unconfirmed news reports about the possibility. ... » READ

Chevy ad launched for sponsorship

deal with Manchester United

2:24 pm U.S. ET | Jul 7

General Motors turned one of the most hotly debated sports sponsorship deals of recent years into an advertising reality today by launching a video that celebrates the Chevrolet's "Bowtie" logo succeeding AON as Manchester United's match-shirt sponsor. ...
» READ

Supplier price-fixing crackdown jolts Japan's business culture

UPDATED: 7/7/14 3:59 pm ET
12:01 am U.S. ET | Jul 4

Compared with just two years ago, Japanese parts makers are scrambling to educate employees on actions that are off-limits. The buzzword of the times: compliance. Compared with just two years ago, Japanese parts makers are scrambling to educate employees on actions that are off-limits. ... » READ

THE GM RECALL

GM switch complaints began 17 years ago, long before Cobalt

6:55 pm U.S. ET | Jul 3

General Motors car owners have been complaining to dealers about defective ignition switches since 1997, years before the automaker launched the Chevrolet Cobalt and other small cars with faulty switches linked to at least 13 deaths. ... » READ

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RICHARD TRUETT

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» READ

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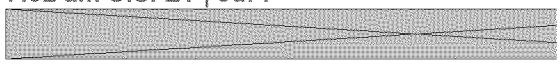
Small cars to fuel production boom in Mexico

BMW to invest $1 billion in new plant in Mexico, employ 1,500 workers

Hyundai fields a more athletic Sonata for '15

GM says it can weather South Africa supplier strike for medium term

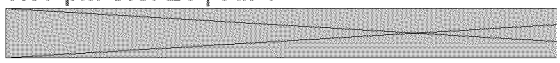
7:52 am U.S. ET | Jul 7



GM sees Cadillac's China sales rising at least 40% in '14

UPDATED: 7/6/14 10:35 am ET

3:37 pm U.S. ET | Jul 4



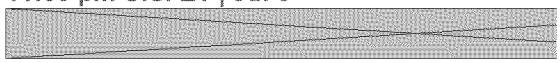
'Made in Germany' loses more luster as BMW, Audi, M-B expand footprints

1:15 pm U.S. ET | Jul 4



NX chief on re-engineering the RAV4 for luxury

11:00 pm U.S. ET | Jul 6



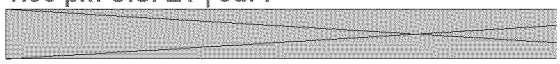
Jeep aims to boost future Wrangler's fuel economy

12:01 am U.S. ET | Jul 5



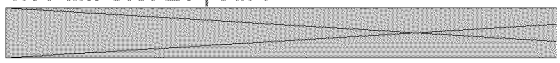
Average U.S. fuel economy 25.5 mpg in June

1:38 pm U.S. ET | Jul 7



VW to invest $2.7 billion for 2 more China assembly plants

4:50 am U.S. ET | Jul 7

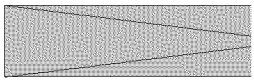


Trade group chief sees growth in dealer-owned operations

12:01 am U.S. ET | Jul 6



Tesla awaits L.A. police findings on Model S theft, fiery crash

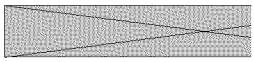


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» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

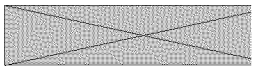
» Nov. 21 - Automobilwoche Kongress



UPCOMING WEBINARS

» July 30 - Marketing Market Price

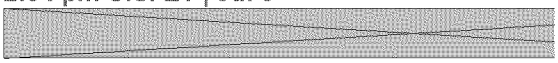
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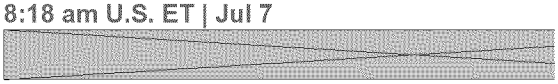
» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that put Profits at Risk

2:34 pm U.S. ET | Jul 5



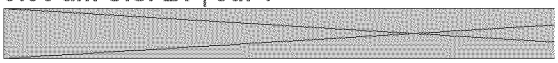
Mazda to recall 42,000 cars with Takata airbags in China

8:18 am U.S. ET | Jul 7



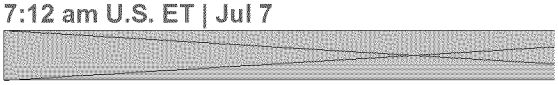
Honda expands giant airbag recall to include California

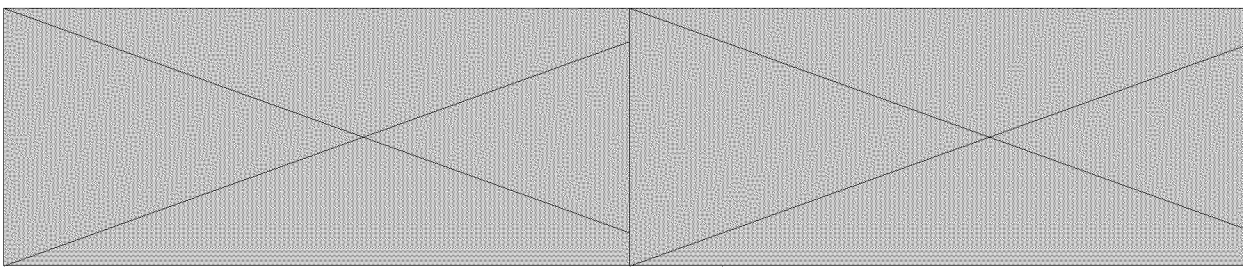
9:36 am U.S. ET | Jul 4



Hyundai sued in S. Korea after overstating fuel efficiency of Santa Fe

7:12 am U.S. ET | Jul 7





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To: Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Tue 7/8/2014 11:02:03 AM
Subject: FAPA-RAF VW370 50379 - 15
FAPA-RAF_7-3-14.pdf
VW370 50379 -15_7-2-14.pdf

Please find enclosed the Laboratory Test Data for the Subject vehicle. If you have any questions or concerns, please contact me.

Thank You,

Vincent Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7
Sent: Tue 7/8/2014 2:58:00 PM
Subject: VW PHEV Label Calculation and BEV Testing Meeting

Hello Jim:

I am looking forward to our meeting this Thursday. It looks like three people from VW will be in attendance at EPA. However, we have some folks that are either traveling or in Germany that would like to join by telephone. I have set up a call-in number for their use, as long as this is okay with you. Your meeting notice provides the location as AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE. It would be great if a telephone with a speaker feature is available.

Best regards,

Ex. 7

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: (2

E-Mail

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Tue 7/8/2014 4:06:18 PM
Subject: RE: VW PHEV Label Calculation and BEV Testing Meeting

Ex. 7 That's fine. There is a conference phone in N66 that we can use.

Jim

From: Ex. 7 @vw.com]
Sent: Tuesday, July 08, 2014 10:58 AM
To: Snyder, Jim
Subject: VW PHEV Label Calculation and BEV Testing Meeting

Hello Jim:

I am looking forward to our meeting this Thursday. It looks like three people from VW will be in attendance at EPA. However, we have some folks that are either traveling or in Germany that would like to join by telephone. I have set up a call-in number for their use, as long as this is okay with you. Your meeting notice provides the location as AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE. It would be great if a telephone with a speaker feature is available.

Best regards,

Ex. 7

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone:

Cell: (

E-Mai

Ex. 7

To: Bain, Debbie T.[baindt@ornl.gov]; Bluestein, Linda[linda.bluestein@ee.doe.gov]; Bunker, Amy[Bunker.Amy@epa.gov]; Dafoe, Wendy[wendy.dafoe@nrel.gov]; Deitchel, Judi[judi.deitchel@nrel.gov]; French, Roberts[french.roberts@epa.gov]; Gibson, Robert C.[gibsonrc@ornl.gov]; Hopson, Janet L.[hopsonjl@ornl.gov]; Pugliese, Holly[pugliese.holly@epa.gov]; Saulsbury, Bo[saulsburyjw@ornl.gov]; Shea, Shannon[shannon.shea@ee.doe.gov]; Smith, Dennis[dennis.a.smith@ee.doe.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Zaremski, Sara[zaremski.sara@epa.gov]
Cc: Snapp, Lisa[snapp.lisa@epa.gov]
From: Good, David
Sent: Tue 7/8/2014 6:46:27 PM
Subject: RE: My homework items are attached from our EPA/DOE 7/2/2014 meeting
Future MPG Technology from EPA 2017 CAFE-GHG final rule.714.pdf
2006 FE Guide-advanced technologies.714.pdf
2009-13MY VW TDI Biodiesel letter-Feb-2013.pdf

Dennis, Debbie & all,

Attached are:

- The advanced technology section of the 2006 FE Guide (for reference)

- Future technologies which EPA and NHTSA expect will be on 2015-2025 vehicles (as outlined in the preamble of the EPA/NHTSA 2017-2025 GHG/CAFE final rule).

- A copy of VW's B20 Biodiesel letter which was sent to 2009-2013 Illinois owners of VW diesel-fueled vehicles. [Although the VW letter is available on the web, please don't go out of your way to circulate it outside of your office.]

Non-Responsive

For Biodiesel, I'd recommend we add a B20 footnote to vehicles in the 2015 Printed Guide which recommend B20 to their customers. The manufacturer's maximum percent Biodiesel

recommendation is in column 31 of the spreadsheet which I send to Janet. If you have any interesting technical information about Biodiesel, please forward it to us EPA folks.

Dave

From: Bain, Debbie T. [mailto:baindt@ornl.gov]
Sent: Tuesday, July 01, 2014 2:12 PM
To: Bain, Debbie T.; Bluestein, Linda; Bunker, Amy; Dafoe, Wendy; Deitchel, Judi; French, Roberts; Gibson, Robert C.; Good, David; Hopson, Janet L.; Pugliese, Holly; Saulsbury, Bo; Shea, Shannon; Smith, Dennis; Wehrly, Linc; Zaremski, Sara
Subject: REMINDER: 2015 FEG Kick-Off Call TOMORROW

Hello All:

Our first conference call for the 2015 Fuel Economy Guide will be tomorrow, July 2 at 2:30 PM (Eastern Time).

The call-in number is 865-574-1000; ask for Bo Saulsbury's conference call.

AGENDA

Schedule

Covers (if ready from graphic artist)

Text Revisions

Hot Topics?

I have attached a copy of the 2015 FEG Timeline and a Word file of last year's text to review.

Thank you.

Debbie

865-946-1311

Volkswagen of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

<MONTH YEAR>

<CUSTOMER NAME>
<CUSTOMER ADDRESS>
<CUSTOMER CITY STATE ZIPCODE>

Vehicle Identification Number (VIN): <VIN>

Subject: 2009-2013 Model Year Volkswagen TDI® Clean Diesel Vehicles Registered in Illinois Using Biodiesel Blend Fuels

Dear Volkswagen TDI Clean Diesel Owner,

As a valued Volkswagen customer, your satisfaction is our utmost priority. Because we support the development and use of renewable fuels (such as biodiesel fuel blends) we are writing to customers who have Volkswagen TDI® Clean Diesel engine vehicles registered in the State of Illinois in order to share some important information about using biodiesel fuel blends in these vehicles.

What is biodiesel?

Biodiesel is a domestically produced, clean-burning and renewable partial substitute for conventional (petroleum) diesel fuel.

Why is it important for me to know about biodiesel fuel blends?

Your vehicle was originally designed to run on "ULSD" - Ultra Low Sulfur Diesel No. 2 – fuel that complies with ASTM D-975 specifications and permits up to a maximum blend of 5% biodiesel (B5).

Due to Illinois state tax incentives for biofuels, biodiesel blends of B5 or less may not be available in Illinois. *However, we want to assure you that Volkswagen will continue to honor the terms and conditions of the Volkswagen Limited Warranties that came with your vehicle.*

Biodiesel blends (up to B20) may be used in your Illinois-registered TDI® Clean Diesel vehicle; however please be aware that biodiesel has characteristics that are different from other kinds of fuel, especially petroleum-based fuels.

How does biodiesel differ from ULSD diesel fuel?

Biodiesel can attract water and also deteriorate with age. Small amounts of biodiesel can get into the engine oil, but unlike petroleum diesel, it does not evaporate over time. This can cause the oil level in the engine to rise and can affect the quality of the oil.

USA VWBoD IL

When I use biodiesel blends in my Illinois-registered Volkswagen TDI® Clean Diesel vehicle, what should I remember?

- Routinely check the engine oil level. A good time to do this is when you refuel, especially if you regularly do a lot of short distance or stop-and-go driving. This will help you see if the engine oil level is getting **higher**. (A rising oil level beyond the maximum indicator means an oil change is needed due to the dilution of the oil in the system; a potential characteristic of biodiesel use.) See your Owner's Manual for additional information on checking the engine oil level in your vehicle.
- If you ever notice that the engine oil level has risen or is above the maximum indicator, contact your authorized Volkswagen dealer or Volkswagen Customer CARE to schedule an oil change – regardless of the time or mileage that has elapsed since you last had an oil change performed.
- Continue to follow the oil change intervals found in the maintenance booklet that came with your vehicle, and use only engine oil that expressly complies with Volkswagen quality standard VW 507 00.
- Refuel only at trusted, commercial fueling stations that are located near main highways. These stations are more likely to have "fresh" biodiesel fuels that have not aged significantly.
- When your vehicle will be in storage (or not driven) for several weeks or months, please completely fill the fuel tank. If possible, fill the tank with Ultra Low Sulfur Diesel fuel (ASTM D975 standard Grade No. 2 D S15).

Can we assist you further?

If you have additional questions about your Illinois-registered TDI® Clean Diesel vehicle, please call or write to us at:

Volkswagen of America, Inc.
Attn: Customer CARE
3800 Hamlin Road, Auburn Hills, MI 48326
1-800-444-8982

Please keep this letter with your Warranty booklet for future reference, and deliver it to any new owner, along with the owner's manual.

We hope you are enjoying the exceptional performance and fuel economy of your TDI® Clean Diesel vehicle, and we wish you many more miles of driving pleasure. Thank you for driving a Volkswagen!

Sincerely,

Volkswagen Service & Quality

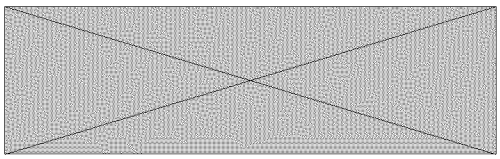
USA VW Bod R

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 7/8/2014 8:14:32 PM
Subject: P.M. NEWSCAST: Bill Ford on the future, Carlos Ghosn on good 'marriages' | VW hatchback halt | Tesla China flap | Tax woes for Delphi

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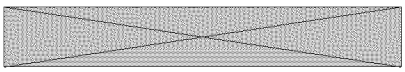
July 8, 2014



Bill Ford on the future »

Tesla in China dispute »

Tax woes for Delphi »



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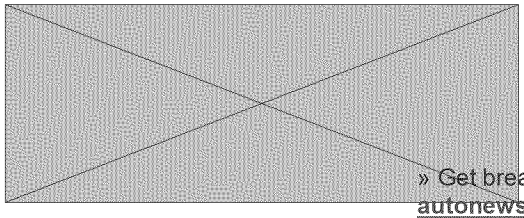
. .

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 7/8/2014 8:43:42 PM
Subject: DAILY: Delphi CEO will testify about GM recall | U.S. recalls smash single-year record | Subaru plans next-generation BRZ | VW stops U.S sales of some Golfs, GTIs for steering flaw

Today's most read story

Next-gen BRZ planned, says Subaru boss

July 8, 2014



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TOP NEWS

THE GM RECALL

Delphi CEO summoned to Capitol Hill on GM recall

4:01 pm U.S. ET | Jul 8

Delphi Automotive, which supplied the faulty ignition switch at the center of General Motors' safety crisis, will join GM on Capitol Hill's hot seat. ... » READ

U.S. auto recalls smash single-year record with 6 months to go

12:49 pm U.S. ET | Jul 8

Automakers this year have already recalled more vehicles in the United States than in any other year on record. NHTSA says U.S. recalls total 37.5 million cars to date, topping the 30.8 million record set in 2004. ... » READ

Next-gen BRZ planned, says

Subaru boss

12:01 am U.S. ET | Jul 7

Subaru plans another generation of the BRZ, the sporty coupe jointly developed with Toyota Motor Corp. ... » READ

VW orders sales halt for Golf, GTI over steering flaw

11:24 am U.S. ET | Jul 8

Volkswagen has ordered dealers in the United States and Canada to not sell about 800 units of its new Golf and GTI hatchbacks because a mistake in assembly could cause steering problems. ... » READ

Retail demand, favorable credit keep wholesale used-vehicle prices high

4:29 pm U.S. ET | Jul 8

Wholesale prices of used vehicles in June fell 1 percent from the previous month's level but were 4 percent higher than in June 2013, according to the Manheim Used Vehicle Value Index released today. ... » READ

Subaru recalls cars with Takata airbag inflators in U.S.

1:32 pm U.S. ET | Jul 8

Subaru of America is recalling 8,557 older model cars in the United States equipped with potentially defective airbag inflators made by Japanese supplier Takata, the automaker and federal regulators said today. ... » READ

MOST READ (Last 7 days)

Supercharged Hellcat Challenger SRT rated at 707-hp

Small cars to fuel production boom in Mexico

Jeep aims to boost future Wrangler's fuel economy

BMW to invest $1 billion in new plant in Mexico, employ 1,500 workers

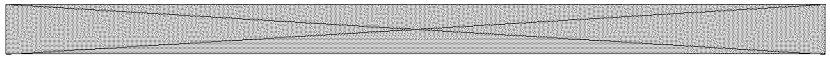
'Made in Germany' loses more luster as BMW, Audi, M-B expand footprints

Viral video rankings for week of 7/8/2014

Lexus dazzles with light display, but Chevy tops list

12:01 am U.S. ET | Jul 8

Chevrolet's spot announcing its 72 hour sale last week went viral, coming in at No. 1 on our auto brand viral video chart with 1,469,311 views. ... » Watch the videos



Ford announces 6 recalls covering 100,610 vehicles in North America

10:57 am U.S. ET | Jul 8



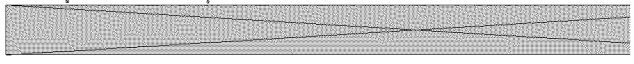
GM won't use insurance proceeds to pay ignition-switch claims

10:31 am U.S. ET | Jul 8



Bill Ford predicts 'radical transformation' of auto industry

1:16 pm U.S. ET | Jul 8



Agnelli family may tighten grip on Fiat after merger with Chrysler

5:43 am U.S. ET | Jul 8



Mexico projected to surpass Brazil as top Latin American vehicle producer

12:01 am U.S. ET | Jul 8



Delphi latest in fight over offshore U.S. tax shelters

2:47 pm U.S. ET | Jul 8



Tesla sued in China by businessman, escalating trademark dispute

9:34 pm U.S. ET | Jul 7



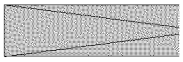


UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

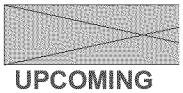
» Oct. 15 - Best Dealerships To Work For

» Nov. 21 - Automobilwoch Kongress



UPCOMING WEBINARS

» July 30 - Marketing Market Price by MAX Digital



UPCOMING WEBINARS

» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that put Profits at Risk

Superior Industries faces proxy fight over board members

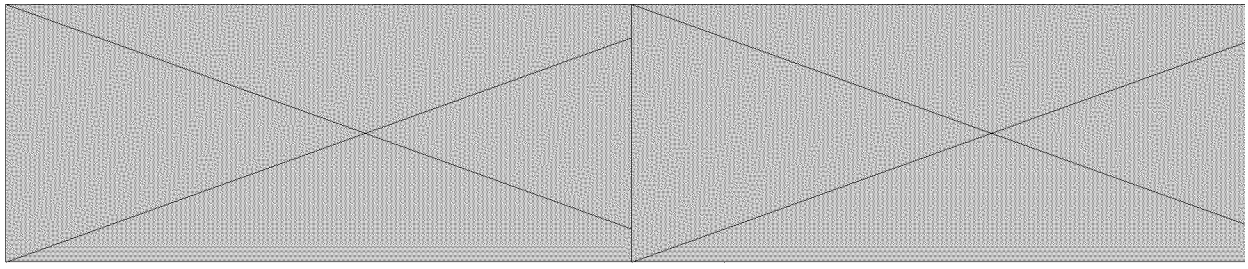
4:08 pm U.S. ET | Jul 8



Audi joins Mercedes in narrowing BMW's global luxury lead

6:55 am U.S. ET | Jul 8





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S1 S 9    AGA  0101      HFET M-6               AVGA-0101
S2   3          01   07:57:21 07/08/14 07:57:22 07/08/14
S3 36.0 15.0 25.0 40.0 47.0 53.0
S4 36.0 15.0 25.0 40.0 47.0 53.0
S5
S6
S7 003 HWFE(Cert) HWFE(NoWarmup) HWFE(BI-Manual) HWFE(BI-Auto) <other>
S8 2015
SA 022 xxx   SP  12 Bad mph.  t= 1529.0 secs  s= 36.0 mph is outside mph range.
SA          min= 28.97 mph, max= 29.63 mph
SC STANDARD M-6 SHIFT SCHEDULE FOR HFET - No Downshifts - DECLUTCH FROM 6TH GEAR
SP  1 0007.2 12   2
SP  2 0011.6 23   3
SP  3 0052.0 34   4
SP  4 0072.0 45   5
SP  5 0330.9 56   6
SP  6 0747.0 60
SP  7 0787.2 12   2
SP  8 0791.6 23   3
SP  9 0832.0 34   4
SP 10 0852.0 45   5
SP 11 1110.9 56   6
SP 12 1529.0 60
SEND
```

```
S1 S 9    AGA  0100      FTP M-6 NO DOWNSHIFTS   AVGA-0100
S2  3          01   07:57:17 07/08/14 07:57:17 07/08/14
S3 17.0 15.0 25.0 40.0 47.0 53.0
S4 17.0 15.0 25.0 40.0 47.0 53.0
S5
S6
S7 002 FTP(Cert) LA4(PrepOnly) LA4 505 <other>
S8 2015
SA 022 xxx   SP   3 Bad mph.  t=  119.0 secs  s= 17.0 mph is outside mph range.
SA          min= 18.37 mph, max= 19.03 mph
SA 022 xxx   SP   9 Bad mph.  t=  311.0 secs  s= 36.0 mph is outside mph range.
SA          min= 36.85 mph, max= 37.15 mph
SA 022 xxx   SP  12 Bad mph.  t=  391.0 secs  s= 17.0 mph is outside mph range.
SA          min= 17.22 mph, max= 17.78 mph
SA 022 xxx   SP  15 Bad mph.  t=  423.0 secs  s= 17.0 mph is outside mph range.
SA          min= 18.07 mph, max= 18.73 mph
SA 022 xxx   SP  18 Bad mph.  t=  498.0 secs  s= 17.0 mph is outside mph range.
SA          min= 19.53 mph, max= 20.07 mph
SA 022 xxx   SP  21 Bad mph.  t=  546.0 secs  s= 17.0 mph is outside mph range.
SA          min= 19.47 mph, max= 20.13 mph
SA 022 xxx   SP  24 Bad mph.  t=  614.0 secs  s= 17.0 mph is outside mph range.
SA          min= 19.17 mph, max= 19.83 mph
SA 022 xxx   SP  27 Bad mph.  t=  672.0 secs  s= 17.0 mph is outside mph range.
SA          min= 18.21 mph, max= 18.79 mph
SA 022 xxx   SP  32 Bad mph.  t=  757.0 secs  s= 17.0 mph is outside mph range.
SA          min= 16.25 mph, max= 16.75 mph
SA 022 xxx   SP  38 Bad mph.  t= 1017.0 secs  s= 17.0 mph is outside mph range.
SA          min= 17.20 mph, max= 17.80 mph
SA 022 xxx   SP  41 Bad mph.  t= 1080.0 secs  s= 17.0 mph is outside mph range.
SA          min= 17.74 mph, max= 18.26 mph
SA 022 xxx   SP  44 Bad mph.  t= 1146.0 secs  s= 17.0 mph is outside mph range.
SA          min= 17.25 mph, max= 17.75 mph
SA 022 xxx   SP  51 Bad mph.  t= 1307.0 secs  s= 17.0 mph is outside mph range.
SA          min= 17.77 mph, max= 18.43 mph
SA 022 xxx   SP  56 Bad mph.  t= 1488.0 secs  s= 17.0 mph is outside mph range.
SA          min= 18.37 mph, max= 19.03 mph
SA 022 xxx   SP  60 Bad mph.  t= 1573.0 secs  s= 47.0 mph is outside mph range.
SA          min= 46.70 mph, max= 46.90 mph
SA 022 xxx   SP  62 Bad mph.  t= 1680.0 secs  s= 36.0 mph is outside mph range.
SA          min= 36.85 mph, max= 37.15 mph
SA 022 xxx   SP  65 Bad mph.  t= 1760.0 secs  s= 17.0 mph is outSC STANDARD M-6 SHIFT
SCHEDULE FOR FTP - NO DOWNSHIFTS DECLUTCH FROM 6TH GEAR AT
SP  1 0025.3 12   2
SP  2 0063.0 23   3
SP  3 0119.0 30
SP  4 0167.6 12   2
SP  5 0171.5 23   3
SP  6 0198.6 34   4
SP  7 0204.3 45   5
SP  8 0224.8 56   6
SP  9 0311.0 60
SP 10 0351.3 12   2
SP 11 0355.9 23   3
SP 12 0391.0 30
SP 13 0406.8 12   2
SP 14 0410.0 23   3
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SP 15 0423.0 30
SP 16 0451.6 12  2
SP 17 0454.6 23  3
SP 18 0498.0 30
SP 19 0519.5 12  2
SP 20 0530.0 23  3
SP 21 0546.0 30
SP 22 0573.3 12  2
SP 23 0608.0 23  3
SP 24 0614.0 30
SP 25 0651.8 12  2
SP 26 0658.7 23  3
SP 27 0672.0 30
SP 28 0701.3 12  2
SP 29 0720.0 20
SP 30 0733.5 12  2
SP 31 0739.5 23  3
SP 32 0757.0 30
SP 33 0770.8 12  2
SP 34 0778.0 23  3
SP 35 0951.0 30
SP 36 0964.0 12  2
SP 37 0971.3 23  3
SP 38 1017.0 30
SP 39 1057.4 12  2
SP 40 1064.3 23  3
SP 41 1080.0 30
SP 42 1109.4 12  2
SP 43 1122.0 23  3
SP 44 1146.0 30
SP 45 1173.0 12  2
SP 46 1181.6 20
SP 47 1209.7 12  2
SP 48 1236.2 20
SP 49 1270.4 12  2
SP 50 1292.0 23  3
SP 51 1307.0 30
SP 52 1343.0 12  2
SP 53 1361.4 20
SP 54 1394.3 12  2
SP 55 1432.0 23  3
SP 56 1488.0 30
SP 57 1536.6 12  2
SP 58 1540.5 23  3
SP 59 1567.6 34  4
SP 60 1573.0 45  5
SP 61 1593.8 56  6
SP 62 1680.0 60
SP 63 1720.3 12  2
SP 64 1724.9 23  3
SP 65 1760.0 30
SP 66 1775.8 12  2
SP 67 1779.0 23  3
SP 68 1792.0 30
SP 69 1820.6 12  2
SP 70 1823.6 23  3
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SP 71 1868.0 30
SEND

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0101

VGA

HFET M-6

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003

2015

STANDARD M-6 SHIFT SCHEDULE FOR HFET - No Downshifts - DECLUTCH FROM 6TH GEAR AT 36 MPH

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787.2

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791.6

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VGA

FTP M-6 NO DOWNSHIFTS

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2015

STANDARD M-6 SHIFT SCHEDULE FOR FTP - NO DOWNSHIFTS DECLUTCH FROM 6TH GEAR AT 36 MPH

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171.5

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198.6

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53

56

9

311

36

60

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23

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454.6

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739.5

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1122

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1236.2

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1270.4

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1292

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1361.4

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1394.3

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1540.5

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1567.6

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1724.9

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1775.8

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1779

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1792

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1820.6

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12

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1823.6

25

23

71

1868

17

30

20140702

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/9/2014 3:01:23 PM
Subject: pick-up Volkswagen EDVs

Jim;

FYI…….the four Volkswagen cars will be picked up today, the commercial carrier is on the way there now.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Ott, Franz[Ott.Franz@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; French, Roberts[french.roberts@epa.gov]; Good, David[good.david@epa.gov]
Cc: Ex. 7 @volkswagen.de]
From: Ex. 7
Sent: Wed 7/9/2014 5:47:23 PM
Subject: RE: VW PHEV label calculation and BEV testing
PHEV_BEV_VW_EPA_Meeting_07_14.pdf

To all:

Attached please find an updated copy of the presentation material for tomorrow's meeting. Most of the information is the same as distributed with the meeting invitation, however, some clarification has been made. Questions on the topics covered are found at the bottom of the slides. In addition, Slide 9 (new) includes some specific test-related questions.

You will note that the slides pertaining to the wall box for EV charging have been removed, since we believe that our questions have been answered. We will be bringing a wall box and discussing the installation for forthcoming testing. We also look forward to seeing the laboratory's charge monitoring set-up.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office
Volkswagen Group of America, Inc.
Phone:
Cell: (2
E-Mail:
Ex. 7

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Friday, June 27, 2014 2:11 PM
To: Snyder, Jim; Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7 Ex. 7 Good, David; Ex. 7 Ex. 7 Ex. 7
Cc: Ex. 7
Subject: VW PHEV label calculation and BEV testing
When: Thursday, July 10, 2014 9:30 AM-10:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

When: Thursday, July 10, 2014 9:30 AM-10:30 AM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

<< File: 2015 PHEV calculations _Berechnungsvorlage_02.pptx >>

From: Olechiw, Michael
Location: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: FW: Meeting with VW regarding Tier 3 Implementation
Start Date/Time: Wed 7/16/2014 1:00:00 PM
End Date/Time: Wed 7/16/2014 3:00:00 PM

When: Wednesday, July 16, 2014 9:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

Jim,

I am thinking that VW contacted Olechiw and he arranged the meeting - I am sure you would be welcome to attend, and, it might be a good follow up to our morning meeting where Tony explained the simple new regulations ASD has developed.

Regards,

David

-----Original Appointment-----
From: Olechiw, Michael
Sent: Monday, June 09, 2014 4:28 PM
To: Olechiw, Michael; Wysor, Tad; Fernandez, Antonio; Stout, Alan; Passavant, Glenn; Wright, DavidA; Sigelko, Jenny (EEO); Wehrly, Linc
Subject: Meeting with VW regarding Tier 3 Implementation
When: Wednesday, July 16, 2014 9:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

Proposed Agenda:

- Open points and questions to Tier 3 regulation like
  - Early credits for LEV III concepts (against LEV III requirements or 160mg)
  - Sales bases for Tier 3 calculation (FTP, SFTP / Zero Evap / PM …. phase-in's
  - Tier 3 Compliance reports
- Compliance Road map: "When will be which report or pre report necessary or when we have deadline to decide the option 1 or 2)"
- Confirmation of Tier 3 credit and early credit calculation
  - Carry forward of credits
  - EPA template for Tier 3 Credit calculation?
- Tier 3 Certification
  - Example and approval of DDV test matrix
  - DDV and Evap-testing (no representative Vehicle)

    - Example of EDV test matrix for Tier 3
- Tier 3 Evap
    - Carry over concepts and PID for miles since last leak check

To: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
Cc: Henrietta.Dandy@dot.gov[Henrietta.Dandy@dot.gov]; Zaremski, Sara[zaremski.sara@epa.gov]
From: Good, David
Sent: Wed 7/9/2014 7:33:41 PM
Subject: 2012 CAFE - Non-Responsive

Non-Responsive

Harry,

FYI

Non-Responsive

Also, we are still waiting for any word on NHTSA's letter to VW telling them they need to combine VW Group & Porsche vehicle for 2012 CAFE purposes. Please let us know when you expect the letter will be signed.

Thanks

Dave

To: Good, David[good.david@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov];
t.letkiewicz.ctr@dot.gov[t.letkiewicz.ctr@dot.gov]
From: Harry.Thompson@dot.gov
Sent: Wed 7/9/2014 7:44:40 PM
Subject: RE: 2012 CAFE - EPA sent out two GHG/CAFE letters today (2012 Toyota PC and 2012 BYD---who makes small EV SUVs which are in the PC category for CAFE)

Message received, will check for Porsche & BYD tomorrow. I am reviewing a draft of the letter to VW re MY 2012 VW-Porsche CAFE. Hope to get it signed and sent within the next week.

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, July 09, 2014 3:34 PM
To: Thompson, Harry (NHTSA)
Cc: Dandy, Henrietta (NHTSA); Zaremski, Sara
Subject: 2012 CAFE - EPA sent out two GHG/CAFE letters today (2012 Toyota PC and 2012 BYD---who makes small EV SUVs which are in the PC category for CAFE)

Harry,

FYI

You should receive the EPA data files and a copy of the letter & attached summary report through the new automated process. As I understand it, you will need to check your EPA electronic mailbox (the reports are not emailed to you as in the past).

Let me know if the process doesn't work as expected---and whether I need to send you a courtesy email every time I do a CAFE. [It's no problem for me---just let me know who I should cc.]

Also, we are still waiting for any word on NHTSA's letter to VW telling them they need to combine VW Group & Porsche vehicle for 2012 CAFE purposes. Please let us know when you expect the letter will be signed.

Thanks

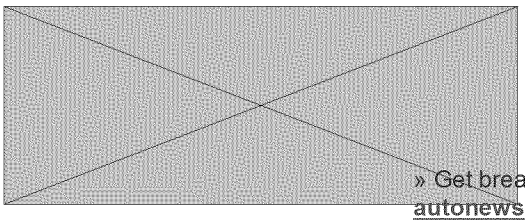
Dave

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Wed 7/9/2014 8:44:08 PM
Subject: DAILY: Nissan will build Infiniti QX30 compact SUV in UK | Ford's Odell says European recovery still shaky | Minivans are too practical to have the reputation they have

Today's most read story

Bill Ford predicts 'radical transformation' of auto industry

July 9, 2014



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TOP NEWS

Nissan will build Infiniti QX30 compact SUV in UK

2:20 am U.S. ET | Jul 9

The Infiniti QX30 compact SUV will be built for global markets -- including the United States and China -- at Nissan's factory in England, alongside the Infiniti Q30 hatchback. Q30 production will begin in mid-2015 with QX30 output starting shortly after. ... » READ

Ford's Odell says European recovery still shaky

11:49 am U.S. ET | Jul 9

Ford's European operations are sharing in the industry's modest sales recovery this year, but Ford of Europe President Stephen Odell warned today that some of the region's underlying economic weaknesses still pose a threat. ... » READ

GM Korea workers vote to strike as

wage talks continue

6:29 am U.S. ET | Jul 9

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Porsche first-half sales rise 8%, boosted by gains in Europe

12:01 am U.S. ET | Jul 9

Sales of Porsche sports cars and crossovers increased 8 percent to 87,800 vehicles in the first half, powered by rising demand for the face-lifted Panamera sedan and healthy gains in Europe. ... » READ

BEST PRACTICES

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12:01 am U.S. ET | Jul 7

When it comes to customizing, there are the usual hot-rod-able models like the Ford Mustang and Chevy Camaro. But the Nissan Altima? Absolutely, says Eric Grubbs, CEO of Grubbs Nissan in Bedford, Texas. ... » READ

ON THE BLOGS

LARRY P. VELLEQUETTE

Minivans are too practical to have the reputation they have

» READ

MOST READ (Last 7 days)

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Supplier price-fixing crackdown jolts Japan's business culture

Automotive News names the Best Dealerships To Work For

'Made in Germany' loses more luster as BMW, Audi, M-B expand footprints

Top black dealer groups' sales up

12:01 am U.S. ET | Jul 7

'Transformers' star Trumpchi GS5 ready for its close-up in the U.S.

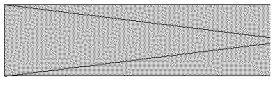
12:01 am U.S. ET | Jul 7

Toyota r&d boss: EVs in need of a Nobel idea

12:01 am U.S. ET | Jul 7

How Calif. store battles service drive bottlenecks

12:01 am U.S. ET | Jul 7



UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

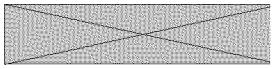
» Nov. 21 - Automobilwoche Kongress



UPCOMING WEBINARS

» July 30 - Marketing Market Price

by MAX Digital



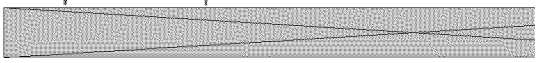
UPCOMING WEBINARS

» July 16 - Plugging the Leaks in F&I: How



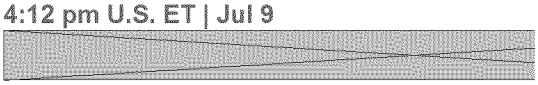
Penske Logistics to close site servicing Ford

3:20 pm U.S. ET | Jul 9



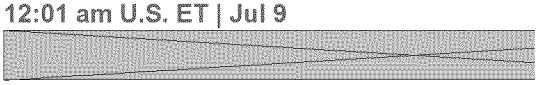
Superior investor touts board slate in proxy fight

4:12 pm U.S. ET | Jul 9



Rolls-Royce reports record first-half sales on Europe demand

12:01 am U.S. ET | Jul 9

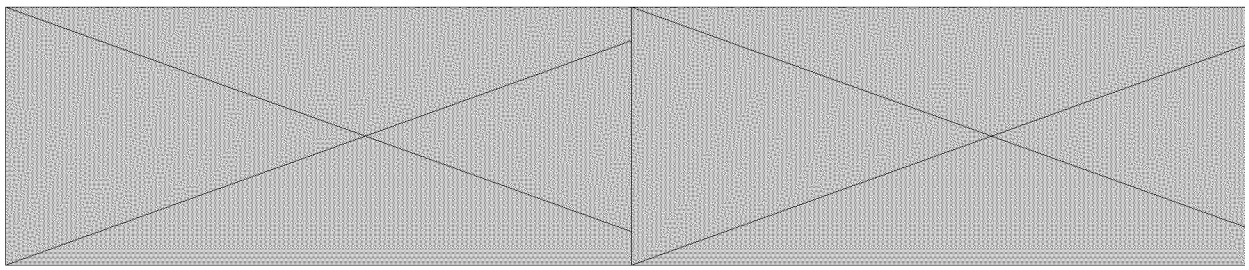


Bentley first-half sales rise 23% on China, Middle East demand

5:22 am U.S. ET | Jul 9



to Deal with Inefficiencies that put Profits at Risk



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To: Ex. 7 @vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; French, Roberts[french.roberts@epa.gov]; Ott, William[ott.william@epa.gov]
Cc: Ex. 7 @volkswagen.de]; Ex. 7 @vw.com]; Ex. 7 Ex. 7 @volkswagen.de]
From: Good, David
Sent: Thur 7/10/2014 3:37:29 PM
Subject: RE: VW PHEV label calculation and BEV testing
EV Verify Rel 9and10-Charge Depleting example data.8-9-2012.pdf
PHEV - Verify Rel9-Charge Depleting example data-2-10-2011.pdf
Accord PHEV FE Label 04-15-13-final from Honda.pdf
2014 volt label image-from GM-6-10-2013.pdf
2014 Porsche Panamera PHEV FE Label-from Ross-3-31-2014.pdf
2015 Porsche 918 FE label-from Ross-3-19-2014.pdf
2014MY LEAF Label-from Nissan-1-14-2014.pdf

Ex. 7

Here are some templates for entering EV & PHEV test data into Verify plus a few FE Labels (window stickers). Most of the labels are 2014---so you'll have to revise the average vehicle costs, etc to the 2015 values (24 mpg & $11,000 5-year cost) plus the ranges in class and the best overall mpg rating (119 MPGe).

Let me know if you need any more Verify examples or FE Labels.

Dave

From: Ex. 7 @vw.com]
Sent: Wednesday, July 09, 2014 1:47 PM
To: Snyder, Jim; Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Good, David
Cc: Ex. 7
Subject: RE: VW PHEV label calculation and BEV testing
Importance: High

To all:

Attached please find an updated copy of the presentation material for tomorrow's meeting. Most of the information is the same as distributed with the meeting invitation, however, some clarification has been made. Questions on the topics covered are found at the bottom of the slides. In addition, Slide 9 (new) includes some specific test-related questions.

You will note that the slides pertaining to the wall box for EV charging have been removed, since we believe that our questions have been answered. We will be bringing a wall box and discussing the installation for forthcoming testing. We also look forward to seeing the laboratory's charge monitoring set-up.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone

Cell: (

E-Mail

Ex. 7

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Friday, June 27, 2014 2:11 PM
To: Snyder, Jim; Wehrly, Linc; Wright, DavidA; Ott, Franz; Dalton, Joel; French, Roberts; Ex. 7

Ex. 7

Cc: Ex. 7
Subject: VW PHEV label calculation and BEV testing
When: Thursday, July 10, 2014 9:30 AM-10:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

When: Thursday, July 10, 2014 9:30 AM-10:30 AM (GMT-05:00) Eastern Time (US & Canada).

Where: AA-Room-Office-N66-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

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<< File: 2015 PHEV calculations _Berechnungsvorlage_02.pptx >>

Example - Charge Depleting Data for an Electric Vehicle

U.S. Environmental Protection Agency

Verify: Engine and Vehicle Compliance System

Welcome, David Good. Today is Monday, November 28, 2011 (ET)

Test Information Details

Test Information | EPA Tab

General Information

Process Code	Correction Submission	Mfr Code	MTX - Mitsubishi Motors Corporation
Test Number	CMTX10016275	Exhaust Evap Test Number Link	
Vehicle ID / Configuration	EB12-EM21 / 0	Test Date	2011-06-15

EPA Only Fields

Dataset Status	Active	Submission Date	11/21/2011
Test Category	Charge Depleting	LOD Test Number	
EPA Dyno Number		Test 5-Cycle Category	Not 5-Cycle

Test Particulars

Test Procedure	81 - Charge Depleting UDDS	Test Fuel Type	62 - Electricity
Verify Test Lab ID	1	Odometer Units	M
Test Start Odometer Reading	300	4WD Test Dyno	No
State of Charge Delta Indicator	No		
Fuel Batch Mfr Code	MTX	Fuel Batch ID	MOKZEV
Fuel Batch Calibration Number	1101	Diesel Adjustment Factor Usage	Downward
Retest Indicator	No	Retest Reason	N/A
Verify Test Number That Was Retested		Manufacturer Confirmatory Test?	No
Original Manufacturer Verify-Test Number That Was Confirmed			

Analytically-Derived FE / CREE

Analytically Derived?	No	ADFE Base Verify Test Number	
ADFE Total Road Load Horsepower	N/A	ADFE ETW	N/A
ADFE N/V Ratio	N/A		

Please enter (Unadjusted test data.)

PHEV/Charge Depleting Test Information

Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	18.3012
Charge Depleting Range (Calculated miles)	97.935	Charge Depleting Range (Actual miles)	97.935
Equivalent All Electric Range (miles)	97.935	Number of Charge Depleting Bags / Phases Conducted	1
Fuel Economy Value Units	miles per gallon		

Please be sure to enter units of mpg

Test Results

UDDS/Highway/US06 Bag/Phase Number 1

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	97.935	–
AMP-HRS (Integrated Amp-hours)	0	–
AS-VOLT (Average System Voltage)	0	–
CO (Carbon Monoxide)	0	–
CO2 (Carbon dioxide)	0	–
CREE (Carbon-Related Exhaust Emissions)	0	–
END-SOC (System End State of Charge	0	–

Amp ~~Watt~~-hours)		
HC-TOTAL (Total Hydrocarbon)	0	
MFR FE (Manufacturer Fuel Economy)	180.4	180.4
NOX (Nitrogen Oxide)	0	
START-SOC (System Start State of Charge Amp ~~Watt~~-hours)	0	

Note: Verify doesn't perform this calculation. Verify currently defaults to the mfr's value

Verify-Calculated Fields

System Miles 289

Fuel Economy

Unrounded Unadjusted Fuel Economy	–	Rounded Unadjusted Fuel Economy	–
Unrounded Adjusted Fuel Economy	–	Rounded Adjusted Fuel Economy	–

CREE / OPT-CREE

Unrounded Unadjusted CREE	–	Rounded Unadjusted CREE	–
Unrounded Adjusted CREE	–	Rounded Adjusted CREE	–
Unrounded Unadjusted OPT-CREE	–	Rounded Unadjusted OPT-CREE	–
Unrounded Adjusted OPT-CREE	–	Rounded Adjusted OPT-CREE	–

Manufacturer Test Comments

This is official EPA confirmatory data. (Temporarily, inputted by Mfr.) UDDS AER(mile):97.935 , AC Energy(kWh/100mile):18.6705

View Related Confirmatory Test Decision Information

$$\text{MFR FE} = \frac{33{,}705\ \left(\frac{\text{kW-hr}}{\text{gal}}\right) \times \text{charge depleting range (miles)}}{\text{Recharge Event Energy (kW-hr)}}$$

ASTM Round to tenths
(units are MPGe)

U.S. Environmental Protection Agency

Verify: Engine and Vehicle Compliance System

Fuel Properties Details

General Information

Mfr Code	MTX	Fuel Batch Id	MOKZEV
Submission Date	11/20/2011		
Fuel Calibration Number	1101	Test Fuel Type	62 - Electricity
Fuel Batch Calibration Effective Date	2011-05-23	Fuel Batch Calibration Ineffective Date	
Fuel Batch Calibration Date	2011-03-01		
Carbon Weight Fraction NMHC		Carbon Weight Fraction HC	
Exhaust Carbon Weight Fraction			
Fuel Methanol Volume Fraction		Fuel Density	
Fuel Specific Gravity		Fuel Net Heating Value	
Fuel Blend Carbon Weight Fraction		Weight Fraction CO2	

View Related Test Datasets

Example - Charge Depleting Data for a PHEV

U.S. Environmental Protection Agency

Verify: Engine and Vehicle Compliance System

Welcome, David Good. Today is Tuesday, February 07, 2012 (ET)

Test Information Details

Test Information | EPA Tab

General Information

Process Code	Correction Submission	Mfr Code	GMX - General Motors LLC
Test Number	CGMX10017746	Exhaust Evap Test Number Link	
Vehicle ID / Configuration	141DRN4804 / 1	Test Date	2011-11-04

EPA Only Fields

Dataset Status	Active	Submission Date	01/04/2012
Test Category	Charge Depleting	LOD Test Number	
EPA Dyno Number		Test 5-Cycle Category	Not 5-Cycle

Test Particulars

Test Procedure	81 - Charge Depleting UDDS	Test Fuel Type	62 - Electricity
Verify Test Lab ID		Odometer Units	M
Test Start Odometer Reading	5038	4WD Test Dyno	No
State of Charge Delta Indicator	Yes		
Fuel Batch Mfr Code		Fuel Batch ID	
Fuel Batch Calibration Number		Diesel Adjustment Factor Usage	Downward
Retest Indicator	No	Retest Reason	N/A
Verify Test Number That Was Retested		Manufacturer Confirmatory Test?	No
Original Manufacturer Verify-Test Number That Was Confirmed			

Analytically-Derived FE / CREE

Analytically Derived?	No	ADFE Base Verify Test Number	
ADFE Total Road Load Horsepower	N/A	ADFE ETW	N/A
ADFE N/V Ratio	N/A		

PHEV/Charge Depleting Test Information

Recharge Event Voltage	~~240~~	Recharge Event Energy (kiloWatt-hours)	~~13.819~~
Charge Depleting Range (Calculated miles)	56.48	Charge Depleting Range (Actual miles)	56.48
Equivalent All Electric Range (miles)	55.85	Number of Charge Depleting Bags / Phases Conducted	9
Fuel Economy Value Units	miles per gallon		

Please enter Reda (calculated range to the calculated transition point in 2 places) per SAE J1711 page 47-48

Please be sure to enter units of mpg.

Test Results

UDDS/Highway/US06 Bag/Phase Number 1

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.439	–
AMP-HRS (Integrated Amp-hours)	3.953	–
AS-VOLT (Average System Voltage)	384.77	–
CO (Carbon Monoxide)	0	
CO2 (Carbon dioxide)	0	
CREE (Carbon-Related Exhaust Emissions)	0	
END-SOC (System End State of Charge (~~Amp-Watt~~ hours)	3.953	–
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0

Please enter CARB value

Cumulative

Please enter CO_2, CREE & MFR FE in Phase 1 for the entire charge depleting test sequence (up to the transition point where the vehicle becomes charge sustaining)

Should be zero for series PHEVs, but not zero for parallel (blended) hybrids

see note on page 2

MFR FE = 33.705 (kW-hr/gal) × Charge Depleting Range (miles) / Recharge Event Energy (kW-hr)

ASTM rounded to tenths (units are MPGe)

See note on page 1 – please enter MFR FE in Phase 1 for the entire test sequence

HC-NM (Non-methane Hydrocarbon)	0	–
HC-TOTAL (Total Hydrocarbon)	0	–
METHANE (CH4 - Methane)	0	–
MFR FE (Manufacturer Fuel Economy)	137.8	137.8
NMOG (Non-methane organic gas (California))	0	–
NOX (Nitrogen Oxide)	0	–
START-SOC (System Start State of Charge Amp Watt-hours)	0	–

UDDS/Highway/US06 Bag/Phase Number 2

Please include FE Bag 1 and FE Bag 2 for all phases, where:

- FE Bag 1 = the gasoline-only fuel economy for each phase
- FE Bag 2 = 0 (needed for a business rule)

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.453	–
AMP-HRS (Integrated Amp-hours)	7.809	–
AS-VOLT (Average System Voltage)	378.24	–
CO (Carbon Monoxide)	0	–
END-SOC (System End State of Charge Amp Watt-hours)	7.809	–
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0	–
HC-TOTAL (Total Hydrocarbon)	0	–
METHANE (CH4 - Methane)	0	–
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0	–
NOX (Nitrogen Oxide)	0	–
START-SOC (System Start State of Charge Amp Watt-hours)	3.953	–

Note: Verify doesn't perform this calculation. Verify currently defaults to mfr's value.

UDDS/Highway/US06 Bag/Phase Number 3

cumulative

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.464	–
AMP-HRS (Integrated Amp-hours)	11.73	–
AS-VOLT (Average System Voltage)	372.04	–
CO (Carbon Monoxide)	0	–
END-SOC (System End State of Charge Amp Watt-hours)	11.73	–
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0	–
HC-TOTAL (Total Hydrocarbon)	0	–
METHANE (CH4 - Methane)	0	–
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0	–
NOX (Nitrogen Oxide)	0	–
START-SOC (System Start State of Charge Amp Watt-hours)	7.809	–

Should be zero for series PHEVs until the transition phase. For parallel (blended) PHEVs, please enter the emissions & FE Bag 1 data for each phase.

UDDS/Highway/US06 Bag/Phase Number 4

Cumulative

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.466	–
AMP-HRS (Integrated Amp-hours)	15.69	–
AS-VOLT (Average System Voltage)	365.29	–
CO (Carbon Monoxide)	0	–
END-SOC (System End State of Charge Amp Watt-hours)	15.69	–
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0	–
HC-TOTAL (Total Hydrocarbon)	0	–
METHANE (CH4 - Methane)	0	–
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0	–
NOX (Nitrogen Oxide)	0	–

START-SOC (System Start State of Charge Amp-Watt-hours)	11.73	--

UDDS/Highway/US06 Bag/Phase Number 5

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.461	--
AMP-HRS (Integrated Amp-hours)	19.71	--
AS-VOLT (Average System Voltage)	359.27	--
CO (Carbon Monoxide)	0	--
END-SOC (System End State of Charge Amp-Watt-hours)	19.71	--
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--
METHANE (CH4 - Methane)	0	--
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0	--
NOX (Nitrogen Oxide)	0	--
START-SOC (System Start State of Charge Amp-Watt-hours)	15.69	--

Cumulative

UDDS/Highway/US06 Bag/Phase Number 6

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.455	--
AMP-HRS (Integrated Amp-hours)	23.8	--
AS-VOLT (Average System Voltage)	353.28	--
CO (Carbon Monoxide)	0	--
END-SOC (System End State of Charge Amp-Watt-hours)	23.8	--
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--
METHANE (CH4 - Methane)	0	--
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0	--
NOX (Nitrogen Oxide)	0	--
START-SOC (System Start State of Charge Amp-Watt-hours)	19.71	--

Cumulative

UDDS/Highway/US06 Bag/Phase Number 7

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.452	--
AMP-HRS (Integrated Amp-hours)	27.92	--
AS-VOLT (Average System Voltage)	347.83	--
CO (Carbon Monoxide)	0	--
END-SOC (System End State of Charge Amp-Watt-hours)	27.92	--
FE BAG 1 (Bag 1 Fuel Economy)	0	0
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--
METHANE (CH4 - Methane)	0	--
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0	--
NOX (Nitrogen Oxide)	0	--
START-SOC (System Start State of Charge Amp-Watt-hours)	23.8	--

Cumulative

UDDS/Highway/US06 Bag/Phase Number 8

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value

VW FOIA, EPA 06/20/2017 2017-FFP_013561

Cumulative

ACT-DISTANCE (Actual Distance Driven (miles))	7.458	--
AMP-HRS (Integrated Amp-hours)	30.29	--
AS-VOLT (Average System Voltage)	343.39	--
CO (Carbon Monoxide)	0.644	--
END-SOC (System End State of Charge Amp-Watt-hours)	30.29	--
FE BAG 1 (Bag 1 Fuel Economy)	96.4	96.4
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0.009	--
HC-TOTAL (Total Hydrocarbon)	0.012	--
METHANE (CH4 - Methane)	0.003	--
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0.0094	--
NOX (Nitrogen Oxide)	0.013	--
START-SOC (System Start State of Charge Amp-Watt-hours)	27.92	--

UDDS/Highway/US06 Bag/Phase Number 9

Cumulative

Test Result Name	Unrounded Test	Verify-Calculated Fuel Economy Mile Per Gallon Equivalent Value
ACT-DISTANCE (Actual Distance Driven (miles))	7.454	--
AMP-HRS (Integrated Amp-hours)	30.36	--
AS-VOLT (Average System Voltage)	341.28	--
CO (Carbon Monoxide)	1.001	--
END-SOC (System End State of Charge Amp-Watt-hours)	30.36	--
FE BAG 1 (Bag 1 Fuel Economy)	51	51
FE BAG 2 (Bag 2 Fuel Economy)	0	0
HC-NM (Non-methane Hydrocarbon)	0.004	--
HC-TOTAL (Total Hydrocarbon)	0.007	--
METHANE (CH4 - Methane)	0.003	--
MFR FE (Manufacturer Fuel Economy)	0	0
NMOG (Non-methane organic gas (California))	0.0042	--
NOX (Nitrogen Oxide)	0.016	--
START-SOC (System Start State of Charge Amp-Watt-hours)	30.2	--

Verify-Calculated Fields

System Miles 5038

Fuel Economy

Unrounded Unadjusted Fuel Economy	--	**Rounded Unadjusted Fuel Economy**	--
Unrounded Adjusted Fuel Economy	--	**Rounded Adjusted Fuel Economy**	--

CREE / OPT-CREE

Unrounded Unadjusted CREE	--	**Rounded Unadjusted CREE**	--
Unrounded Adjusted CREE	--	**Rounded Adjusted CREE**	--
Unrounded Unadjusted OPT-CREE	--	**Rounded Unadjusted OPT-CREE**	--
Unrounded Adjusted OPT-CREE	--	**Rounded Adjusted OPT-CREE**	--

Manufacturer Test Comments

150K CD EMIS TEST

View Related Confirmatory Test Decision Information

VW FOIA, EPA 06/20/2017 2017-FFP_013562

HONDA

2014 ACCORD PLUG-IN HYBRID

EXT: **WHITE ORCHID P.** ENGINE NUMBER: **LFA1-0000101**
INT: **GRAY**

STANDARD EQUIPMENT AT NO EXTRA COST

*** TECHNICAL FEATURES ***
- 2.0-Liter DOHC 16-Valve i-VTEC 4-Cyl. Earth Dreams Engine
- 141 Engine Horsepower
- 6.6 kW Onboard Charger
- 41kW (55hp) Battery Power
- Electric Continuously Variable Transmission (eCVT)
- 4-Wheel Disc Brakes
- Front MacPherson Strut Suspension
- Rear Multi-Link Suspension
- Front and Rear Stabilizer Bars
- Electric Power-Assisted Rack-and-Pinion Steering
- Immobilizer Theft-Deterrent System
- ECO Assist System

*** SAFETY FEATURES ***
- Driver's and Front Passenger's Dual-Stage Airbags (SRS)
- Driver's and Front Passenger's Side Airbags w/ SmartVent
- Side Curtain Airbags with Rollover Sensor
- Forward Collision Warning
- Lane Departure Warning
- Anti-Lock Braking System (ABS)
- Brake Assist
- Electronic Brake Distribution (EBD)
- Vehicle Stability Assist (VSA)
- ACE II Body Structure
- Tire Pressure Monitoring System
- Side-Impact Door Beams
- Daytime Running Lights (DRL)
- LATCH System for Child Seats

*** INTERIOR FEATURES ***
- Honda Satellite-Linked Navigation System with Voice Recognition and Rear Multi-View Camera
- HondaLink Real-Time Traffic (available in select markets)
- Bio Fabric Seats
- Leather-Wrapped Steering Wheel
- AM/FM/CD/MP3 Audio Touch Screen System with 6 Speakers
- HondaLink Telematics with Smartphone Applications
- Steering Wheel-Mounted Controls
- Bluetooth HandsFreeLink
- Pandora Internet Radio Interface
- SMS Text Messaging Functionality
- USB Audio Interface
- MP3/Auxiliary Input Jack
- Push-Button Start
- LaneWatch
- Dual-Zone Automatic Climate Control with Air Filtration System
- Rear Console Vents
- Driver's 10-Way Power Seat with 2-Position Memory
- Heated Front Seats
- Heated Rear Seats
- Power Windows and Door Locks
- Front Auto Up/Down Windows
- Auto Dimming Rearview Mirror
- Tilt & Telescopic Steering Column
- Illuminated Visor Vanity Mirrors
- Adaptive Cruise Control (ACC)
- Exterior Temperature Display
- Floor Mats
- HomeLink System
- Maintenance Minder System

*** EXTERIOR FEATURES ***
- 17" X 7.5" Alloy Wheels
- P225/50 R17 All-Season Tires
- Auto-On/Off Headlights
- LED Headlights & Taillights
- Fog Lights
- Heated Power Door Mirrors with Turn Indicators
- Expanded View Driver's Mirror
- Smart Entry System with Security System
- Tire Sealant and Inflator Kit (in place of spare tire)

Manufacturer's Suggested Retail Price	**$39,780.00**
Full Tank of Fuel	**No Charge**

KEY STANDARD FEATURES
***Bluetooth HandsFreeLink**
***USB Audio Interface**
***Rearview Camera**
***Side Curtain Airbags with Rollover Sensor**

Destination and Handling	790.00

TOTAL VEHICLE PRICE
(includes Pre-Delivery Service)

$40,570.00

License and title fees, state and local taxes and dealer options and accessories are not included in the manufacturer's suggested retail price.

CERTIFICATION-PRODUCT LEG
M.S.: 500 2C 8A
TORRANCE, CA 90501

PORT OF ENTRY: RICHMOND
DELIVERY POINT: RICHMOND
SHIP#:
ROW/SPACE:
TRANS.METHOD:

VIN: JHMCR5F7#EC000722

ORIG. DLR: 99EA22
REF.NO: EA22
HN CODE: HN-XXXX
EMISSION: 50 STATE
CONTROL NO: 375405
DEALER: 99EA22

HSC 39037.05 Low-Emission Motor Vehicle

EPA DOT Fuel Economy and Environment

Plug-In Hybrid Vehicle Electricity-Gasoline

Fuel Economy Midsize cars range from 13 to 58 MPGe.The best vehicle rates 121 MPGe.

Electricity + Gasoline
Charge time: 1 hours (240 V)
115 MPGe
0.0 gallons per 100 miles
29 kW-hrs per 100 miles
combined city/highway

Gasoline Only
46 MPG
2.2 gallons per 100 miles
combined city/highway

Driving Range
Electricity + Gasoline: 0 – 4 – 8
All Electric Range = 0 - 13 miles
Gasoline only: 13 – 16 – 570 miles

You save $6,750 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost $950

Fuel Economy & Greenhouse Gas Rating (tailpipe only): 1 — 10 — 10 Best

Smog Rating (tailpipe only): 1 — 9 — 10 Best

This vehicle emits 130 grams CO^2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel & electricity also create emissions; learn more at fueleconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 23 MPG and costs $11,500 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at $3.50 per gallon and $.12 per kW-hr. This is a dual fueled automobile. MPGe is miles per gasoline equivalent. Vehicle emissions are a significant cause of climate change and smog.

fueleconomy.gov
Calculate personalized estimates and compare vehicles

Smartphone QR Code ™

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE
U.S./Canadian Parts Content: **0 %**

Major Sources of Foreign Parts Content:
JAPAN 95 %

NOTE: Parts content does not include final assembly, distribution or other non-parts costs.

FOR THIS VEHICLE
Final Assembly Point:
SAYAMA, SAITAMA JAPAN

Country of Origin: Engine:
JAPAN

Transmission:
JAPAN

GOVERNMENT 5-STAR SAFETY RATING

Overall Vehicle Score **Not Rated**

Based on the combined ratings of frontal, side and rollover.
Should ONLY be compared to other vehicles of similar size and weight.

Frontal Crash	Driver	**Not Rated**
	Passenger	**Not Rated**

Based on the risk of injury in a frontal impact.
Should ONLY be compared to other vehicles of similar size and weight.

Side Crash	Front seat	**Not Rated**
	Rear seat	**Not Rated**

Based on the risk of injury in a side impact.

Rollover **Not Rated**

Based on the risk of rollover in a single vehicle crash.

Star Ratings range from 1 to 5 stars (*****) with 5 being the highest.
Source: National Highway Traffic Safety Administration (NHTSA)
www.safercar.gov or 1-888-327-4236

This vehicle is equipped with a front bumper of a type that has been tested at an impact speed of 2.5 miles per hour, and a rear bumper of a type that has been tested at an impact speed of 5 miles per hour, resulting in no damage to the vehicle's body and safety systems and minimal damage to the bumper and attachment hardware. "Minimal damage to the bumper" means minor cosmetic damage that can be repaired with the use of common repair materials and without replacing any parts. The stronger the bumper, the less likely the vehicle will require repair after a low-speed collision. This vehicle exceeds the current federal bumper standard of 2.5 miles per hour.

◀ PULL THIS STRIP TO EXPOSE ADHESIVE

CHEVROLET

2014 CHEVROLET VOLT

EXTERIOR:
INTERIOR:

THIS IS A TEST LABEL

Visit us at www.chevy.com

THIS LABEL IS AFFIXED FOR SHIPPING PURPOSES ONLY BECAUSE COMPLETE VEHICLE PRICING INFORMATION WAS NOT AVAILABLE AT TIME OF SHIPMENT.

THIS VEHICLE IS NOT FOR SALE, NOR SHOULD IT BE DISPLAYED UNTIL A MANUFACTURER'S PRICE LABEL WITH COMPLETE SUGGESTED RETAIL PRICE INFORMATION IS AFFIXED.

EPA DOT Fuel Economy and Environment

Plug-In Hybrid Vehicle Electricity-Gasoline

Compact cars range from 14 to 105 MPGe.
Fuel Economy The best vehicle rates 121 MPGe.

Electricity
Charge Time: 4 hours (240V)
98 MPGe
35 kW-hrs per 100 miles
combined city/highway

Gasoline Only
37 MPG
2.7 gallons per 100 miles
combined city/highway

Driving Range
All electric range 0 15 30 — Gasoline only 55 380
38 miles

You save $7,000 in fuel costs over 5 years compared to the average new vehicle.

AFS

Annual fuel cost $900

Fuel Economy & Greenhouse Gas Rating (tailpipe only) 1 — 10 Best

Smog Rating (tailpipe only) 1 — 6 — 10 Best

This vehicle emits 81 grams CO_2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel & electricity also create emissions; learn more at fueleconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 23 MPG and costs $11,500 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at $3.75 per gallon and $0.12 per kW-hr. This is a dual fueled automobile. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fueleconomy.gov
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Smartphone QR Code™

GOVERNMENT 5-STAR SAFETY RATINGS

This vehicle has not been rated by the government for overall vehicle score, frontal crash, side crash or rollover risk.

Source: National Highway Traffic Safety Administration (NHTSA)
www.safercar.gov or 1-888-327-4236

Equipped with the safety and connectivity of OnStar.
Push your blue button or visit onstar.com for details.

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE:
U.S./CANADIAN PARTS CONTENT: 45%
MAJOR SOURCES OF FOREIGN PARTS CONTENT: JAPAN 17%
KOREA 19%
NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

FOR THIS VEHICLE:
FINAL ASSEMBLY POINT:
DETROIT, MI U.S.A.
COUNTRY OF ORIGIN:
ENGINE: UNITED STATES
TRANSMISSION (ELECTRIC DRIVE UNIT): JAPAN

This label has been applied pursuant to Federal law - Do not remove prior to delivery to the ultimate purchaser. *Includes Manufacturer's Recommended Pre-Delivery Service. Does not include dealer installed options and accessories not listed above, local taxes or license fees.

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GMLBL_PROD_0029 - 05/17/2013

ORDER NO QRSP31 SALES CODE N
SALES MODEL CODE 1RC66
DEALER NO 34130
FINAL ASSEMBLY:
DETROIT, MI U.S.A.

VIN 1G1RD6E47EU104679

DEALER TO WHOM DELIVERED
GENERAL MOTORS LLC
3300 GM ROAD BLDG 12 MC 483-312-00
MILFORD, MI 48380-3727

EPA DOT Fuel Economy and Environment

Plug-In Hybrid Vehicle
Electricity-Gasoline

Fuel Economy Large Cars range from 14 to 29 MPG. The best vehicle rates 119 MPGe.

Electricity + Gasoline
Charge Time: 3 hours (240V)

50 MPGe
0.5 gallons per 100 miles
52 kW-hrs per 100 miles
combined city/hwy

Gasoline Only

25 MPG
4.0 gallons per 100 miles
combined city/hwy

Driving Range

Electric + Gasoline: 0 — 4 — 10
Gasoline only: 16 — 22 — 540 miles

All Electric Range = 0 - 15 miles

You save $2,250
in fuel costs over 5 years
compared to the average new vehicle.

Annual fuel cost
$1,850

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

MPG 8
1 — 10 Best
CO_2 9

Smog Rating (tailpipe only)

5
1 — 10 Best

This vehicle emits 206 grams CO_2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fueleconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 23 MPG and costs $11,500 to fuel over 5 years. Cost estimates are based on 15,000 miles per year $3.75 per gallon and $0.12 per kW-hr. This is a dual fueled automobile. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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EPA DOT Fuel Economy and Environment

Plug-In Hybrid Vehicle
Electricity-Gasoline

Fuel Economy
Two Seaters range from 10 to 107 MPG. The best vehicle rates 119 MPGe.

Electricity
Charge Time: 3 hours (240V)

67 MPGe
combined city/hwy

50 kW-hrs per 100 miles

Gasoline Only

22 MPG
combined city/hwy

4.5 gallons per 100 miles

Driving Range

All electric range: 0 – 5 – 10 – **12** miles

Gasoline only: 20 – 420

You save $750
in fuel costs over 5 years
compared to the average new vehicle.

Annual fuel cost
$2,050

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

MPG **7**

1 — 10 Best

CO_2 **8**

Smog Rating (tailpipe only)

5

1 — 10 Best

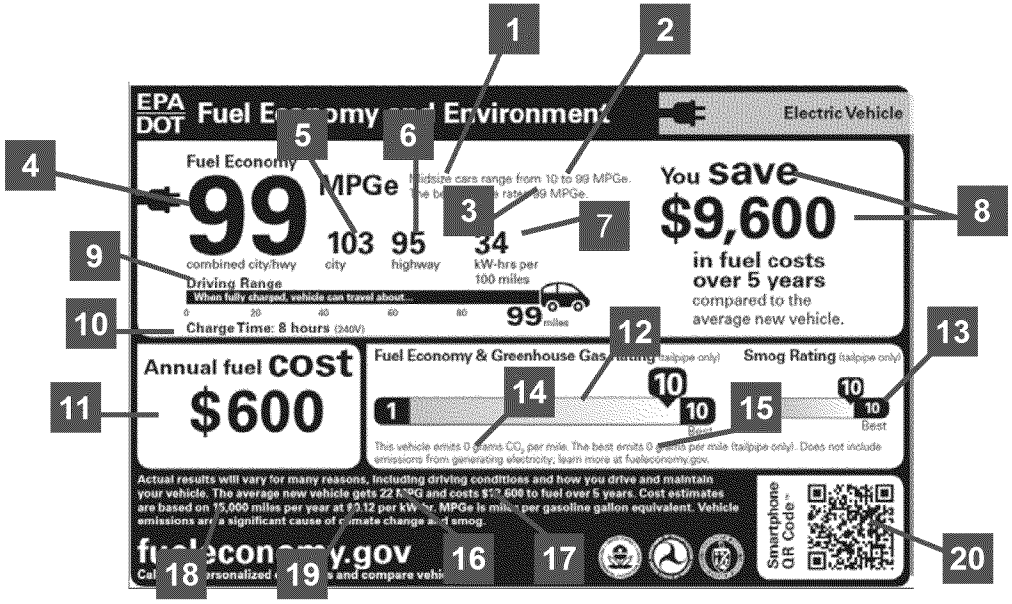
This vehicle emits 277 grams CO_2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fueleconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 24 MPG and costs $11,000 to fuel over 5 years. Cost estimates are based on 15,000 miles per year $3.80 per gallon and $0.12 per kW-hr. This is a dual fueled automobile. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Calculate personalized estimates and compare vehicles

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2014MY X12G FE label value



1	Comparable Class	Midsize cars	11	Annual fuel cost (US$/year)	550
2	Fuel economy range from xx to xx MPGe	from 13 to 114	12	Fuel economy/GHG rating	10
3	The best vehicle	~~121~~	13	Smog rating	10
4	Combined Fuel economy (MPGe)	114	14	This vehicle CO2	0
5	City Fuel economy (MPGe)	126	15	Best CO2	0
6	Highway Fuel economy (MPGe)	101	16	Average new vehicle (MPG)	23
7	Energy consumption (kW-hrs per 100miles)	30	17	Average 5 year fuel cost	11,500
8	Fuel savings·increase (US$/5years)	SAVE $8,750	18	Miles per year	15,000
9	Driving range (miles)	84	19	Fuel cost $ per kWhr	0.12
10	Charge time (hours)	5(for 6.6KWcharger), 8(for 3.6KWcharger)	20	QR Code	901

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Allen, Gregory (EEO)
Sent: Thur 7/10/2014 3:46:32 PM
Subject: R Ex. 7

Hello Jim,

Ex. 7 ave been corrected. Please let us know if they have any other issues with the datasets.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Giles, Michael (EEO)
Sent: Wednesday, July 09, 2014 8:55 AM
To: Allen, Gregory (EEO)
Subject: FW: Need shift schedules

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, July 09, 2014 8:50 AM
To: Giles, Michael (EEO)
Subject: FW: Ex. 7

Mike, Bill ran the Ex. 7 through some checker on it found some Ex. 7 hat

are Ex. 7 . Look at the TXT files. IT shows which Ex. 7 Ex. 7 I think that has to get corrected before he can load them into their system.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Courtois, William
Sent: Tuesday, July 08, 2014 9:23 AM
To: Yang, Ching-Shih
Cc: Haynes, Ben; Snyder, Jim
Subject: Ex. 7

Folks,

drive Ex. 7

See the attached files,

Bill Courtois

From: Yang, Ching-Shih
Sent: Monday, July 07, 2014 1:31 PM
To: Courtois, William
Cc: Haynes, Ben; Snyder, Jim
Subject: RE: Need shift schedules

Attached are the XML shift schedule files.

Thanks, Ching-shih

From: Snyder, Jim
Sent: Monday, July 07, 2014 1:30 PM
To: Yang, Ching-Shih
Cc: Haynes, Ben; Courtois, William
Subject: RE: Need shift schedules

Ching-Shih, Bill, the shift schedules look okay to me. The first file is a single 18 hill LA4. It does not include the 3rd bag hot transient portion after re-start . The 2nd file covers a double Highway test (prep and test).

-Jim

From: Yang, Ching-Shih
Sent: Monday, July 07, 2014 11:13 AM
To: Snyder, Jim
Cc: Haynes, Ben; Courtois, William
Subject: R Ex. 7

Jim,

The Ex. 7 are already in our system. I've attached the excel formats of the files for your review. Please let me know if and when it's good for me to send off to Bill.

Thanks, Ching-shih

From: Snyder, Jim

Sent: Monday, July 07, 2014 11:01 AM
To: Haynes, Ben; Yang, Ching-Shih
Cc: Courtois, William; Spieth, John; Peralta, Maria
Subject: RE: Need shift schedules

Please note that VW has encountered "logistical issues" with this vehicle. They are now saying it won't be available until after 28th. I also asked them if this is a new shift schedule or is it already in our system.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Haynes, Ben
Sent: Monday, July 07, 2014 9:23 AM
To: Snyder, Jim; Yang, Ching-Shih
Cc: Courtois, William; Spieth, John; Peralta, Maria
Subject: Need shift schedules

I have a test request for the following vehicle:

VGA - Volkswagen Group

VW370 40145 /15 – FTP 0100 and HWA 0101

This vehicle can be scheduled for testing the middle of next week 07/17/14 if the shift schedules can be put in place.

Thanks for your help in advance.

Ben Haynes

Technical Information Specialist

TATD/VTC

Supporting the USEPA through Cooperative Agreement

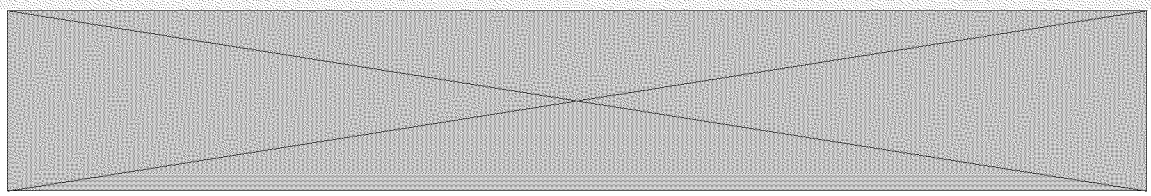
under the SEE Program

Scheduling Office

734-214-4261

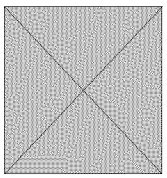
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Thur 7/10/2014 4:03:55 PM
Subject: Green Car Report Daily Headlines

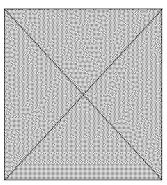
Email not displaying correctly? View it in your browser.



The latest from your friends at GCR:

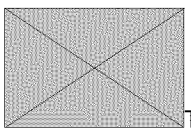
More ways to follow us:





Tesla Model S Hack, Hydrogen Cars In CA, Cadillac ELR Discounts: Today's Car News

Jul 10, 2014 03:26 pm | feedback@highgearmedia.com (Stephen Edelstein)

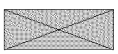


Today on Green Car Reports: A challenge to hack a Tesla Model S, why California prefers hydrogen compliance cars to electric ones, plus five-figure discounts for the 2014 Cadillac ELR. All this and more on Green Car Reports. Will 2014 be the last year for the funky Nissan Cube tall wagon? It didn't take long--just six months--for the $75,000 2014...

comments | read more

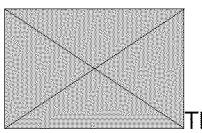






Hack A Tesla Model S And Win $10,000

Jul 10, 2014 02:01 pm | feedback@highgearmedia.com (Antony Ingram)



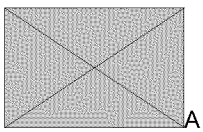
The word "hack" is a little over-used in today's lexicon, but in the general sense it refers to the process of cracking the software system of a computer, a smartphone--or a car. Many electric cars roll those three categories into one, and now the organizers of a computer security conference have set hackers a special challenge:

To hack into a...

comments | read more

2016 Audi R8 Sports Car To Offer Diesel, Electric Variants

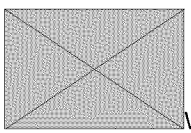
Jul 10, 2014 01:30 pm | feedback@highgearmedia.com (Antony Ingram)

 A few years ago the concept of a green sports car would have been completely alien, but fast-forward a few years and the market has changed significantly. Tesla, for a time, produced its electric Roadster. Ferrari, Porsche and McLaren have all released hybrid hypercars. And with its next-generation R8 sports car, Audi could offer both diesel and...

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Why California Pushes Hydrogen Compliance Cars Over Electric Ones

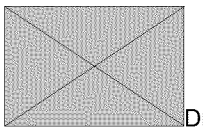
Jul 10, 2014 01:14 pm | feedback@highgearmedia.com (John Voelcker)

 We're starting to hear a lot about hydrogen fuel-cell vehicles from Hyundai, Toyota, and Honda--and we're going to hear a great deal more about them in the years to come. The first 2015 Hyundai Tucson Fuel Cell was leased last month, and Toyota will bring its own hydrogen-powered vehicle into selected California dealerships starting sometime next...

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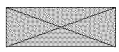
Growth In Diesel Car And Truck Sales Outpaces Market Growth This Year

Jul 10, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 Drivers in the U.S. are finally coming around to the idea of diesel cars, it seems--as sales have increased by 25 percent during the first six months of 2014. In data compiled by HybridCars and Baum and Associates (via Diesel Technology Forum), diesels show six consecutive months of sales growth in the States, the biggest increase coming in April...

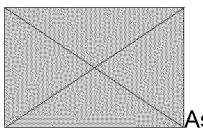
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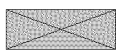
2014 Cadillac ELR: $75K Electric Coupe Gets Five-Figure Discounts, Already

Jul 10, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Ask anyone interested in the Cadillac ELR to name their biggest bone of contention and they'll say one thing: The price. At a shade under $75,000, it's a good $40,000 more expensive than the car it's heavily based on--the Chevrolet Volt. But if you walk into a dealer today and play hard ball, you could shave a five-figure sum off the ELR's lofty...

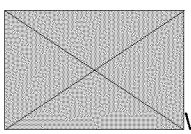
comments | read more





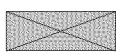
2014 Nissan Cube: The Last Year On Sale For Funky Tall Wagon?

Jul 10, 2014 11:30 am | feedback@highgearmedia.com (John Voelcker)

 While Toyota's Scion xB really invented the modern "tall wagon" category, the runaway sales champion in the segment is the Kia Soul. And among the also-rans sits the even-funkier-than-Soul 2014 Nissan Cube, with its asymmetric wraparound rear window and small dash-top panel for growing grass. Sales figures for the Cube have been dismal--just 5,461...

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Update your profile

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]; Yang, Ching-Shih[Yang.Ching-Shih@epa.gov]
From: Snyder, Jim
Sent: Thur 7/10/2014 7:32:08 PM
Subject: RE: Need shift schedules

Greg, Bill checked the revised files and while the initial errors are fixed, he found a couple more errors near the end. Apparently the checking software stops after a certain number of errors so it didn't see them.

Shift point 68 (@1792sec) and shift point 71 (@1868sec) are outside speed range. Bill suggested duplicating what you did at shift points 15 and 18 since they are repeats from bag 1.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Thursday, July 10, 2014 11:47 AM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Rodgers, William (EEO)
Subject: RE: Need shift schedules

Hello Jim,

VGA Shift Schedules 0100 and 0101 have been corrected. Please let us know if they have any other issues with the datasets.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Giles, Michael (EEO)
Sent: Wednesday, July 09, 2014 8:55 AM
To: Allen, Gregory (EEO)
Subject: FW: Need shift schedules

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, July 09, 2014 8:50 AM
To: Giles, Michael (EEO)
Subject: FW: Need shift schedules

Mike, Bill ran the shift schedules through some checker on it found some time/speed points that are outside the speed trace tolerance. Look at the TXT files. IT shows which time points are outside tolerance. I think that has to get corrected before he can load them into their system.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Courtois, William
Sent: Tuesday, July 08, 2014 9:23 AM
To: Yang, Ching-Shih
Cc: Haynes, Ben; Snyder, Jim
Subject: RE: Need shift schedules

Folks,

VGA 100 and 101 have shift points with (time, speed) values that do not align with drive schedule (time, speed) values.

See the attached files,

Bill Courtois

From: Yang, Ching-Shih
Sent: Monday, July 07, 2014 1:31 PM
To: Courtois, William
Cc: Haynes, Ben; Snyder, Jim
Subject: RE: Need shift schedules

Attached are the XML shift schedule files.

Thanks, Ching-shih

From: Snyder, Jim
Sent: Monday, July 07, 2014 1:30 PM
To: Yang, Ching-Shih
Cc: Haynes, Ben; Courtois, William
Subject: RE: Need shift schedules

Ching-Shih, Bill, the shift schedules look okay to me. The first file is a single 18 hill LA4. It does not include the 3rd bag hot transient portion after re-start . The 2nd file covers a double Highway test (prep and test).

-Jim

From: Yang, Ching-Shih
Sent: Monday, July 07, 2014 11:13 AM
To: Snyder, Jim
Cc: Haynes, Ben; Courtois, William
Subject: RE: Need shift schedules

Jim,

The shift schedules are already in our system. I've attached the excel formats of the files for your review. Please let me know if and when it's good for me to send off to Bill.

Thanks, Ching-shih

From: Snyder, Jim
Sent: Monday, July 07, 2014 11:01 AM
To: Haynes, Ben; Yang, Ching-Shih
Cc: Courtois, William; Spieth, John; Peralta, Maria
Subject: RE: Need shift schedules

Please note that VW has encountered "logistical issues" with this vehicle. They are now saying it won't be available until after 28th. I also asked them if this is a new shift schedule or is it already in our system.

Jim Snyder

Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Haynes, Ben
Sent: Monday, July 07, 2014 9:23 AM
To: Snyder, Jim; Yang, Ching-Shih
Cc: Courtois, William; Spieth, John; Peralta, Maria
Subject: Need shift schedules

I have a test request for the following vehicle:

VGA - Volkswagen Group

VW370 40145 /15 – FTP 0100 and HWA 0101

This vehicle can be scheduled for testing the middle of next week 07/17/14 if the shift schedules can be put in place.

Thanks for your help in advance.

Ben Haynes

Technical Information Specialist

TATD/VTC

Supporting the USEPA through Cooperative Agreement

under the SEE Program

Scheduling Office

734-214-4261

To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Thur 7/10/2014 7:34:51 PM
Subject: 2015 FE Guide - data in Verify
VW_Group_2015 FEGuide-all rel dates-no-sales-7-10-2014.xlsx

Richard

Here's the data just after our macro ran. I haven't had time to clean it up for the Veneno carline name change, etc.

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen	AG	A3	VGA 7	1.8	4
Diesel;		2015 Volkswagen	AG	A3	VGA 101	2.0	4
		2015 Volkswagen	AG	A3 Cabriolet	VGA 6	1.8	4
		2015 Volkswagen	AG	A3 Cabriolet quattro	VGA 5	2.0	4
		2015 Volkswagen	AG	A3 quattro	VGA 4	2.0	4
		2015 Volkswagen	AG	A4	VGA 46	2.0	4
		2015 Volkswagen	AG	A4 quattro	VGA 64	2.0	4
		2015 Volkswagen	AG	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen	AG	A5 Cabriolet quattro	VGA 66	2.0	4
		2015 Volkswagen	AG	A5 quattro	VGA 65	2.0	4
		2015 Volkswagen	AG	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen	AG	A6	VGA 47	2.0	4
		2015 Volkswagen	AG	A6 quattro	VGA 48	2.0	4
		2015 Volkswagen	AG	A6 quattro	VGA 72	3.0	6
Diesel;		2015 Volkswagen	AG	A6 quattro	VGA 17	3.0	6
		2015 Volkswagen	AG	A7 quattro	VGA 71	3.0	6
Diesel;		2015 Volkswagen	AG	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen	AG	A8	VGA 40	3.0	6
		2015 Volkswagen	AG	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen	AG	A8L	VGA 15	3.0	6
		2015 Volkswagen	AG	A8L	VGA 41	3.0	6
		2015 Volkswagen	AG	A8L	VGA 10	4.0	8
		2015 Volkswagen	AG	A8L	VGA 14	6.3	12
		2015 Volkswagen	AG	allroad quattro	VGA 68	2.0	4
		2015 Volkswagen	AG	Q3	VGA 62	2.0	4
		2015 Volkswagen	AG	Q3 quattro	VGA 37	2.0	4
		2015 Volkswagen	AG	Q5	VGA 67	2.0	4
		2015 Volkswagen	AG	Q5	VGA 70	3.0	6
Diesel;		2015 Volkswagen	AG	Q5	VGA 16	3.0	6
Hybrid;		2015 Volkswagen	AG	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen	AG	Q7	VGA 12	3.0	6
		2015 Volkswagen	AG	Q7	VGA 51	3.0	6
		2015 Volkswagen	AG	R8	VGA 27	4.2	8
		2015 Volkswagen	AG	R8	VGA 29	4.2	8
		2015 Volkswagen	AG	R8	VGA 35	5.2	10
		2015 Volkswagen	AG	R8	VGA 33	5.2	10
		2015 Volkswagen	AG	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen	AG	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen	AG	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen	AG	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen	AG	RS5	VGA 30	4.2	8
		2015 Volkswagen	AG	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen	AG	RS7	VGA 21	4.0	8
		2015 Volkswagen	AG	S3	VGA 42	2.0	4
		2015 Volkswagen	AG	S4	VGA 73	3.0	6
		2015 Volkswagen	AG	S4	VGA 76	3.0	6
		2015 Volkswagen	AG	S5	VGA 74	3.0	6
		2015 Volkswagen	AG	S5	VGA 77	3.0	6
		2015 Volkswagen	AG	S5 Cabriolet	VGA 75	3.0	6
		2015 Volkswagen	AG	S6	VGA 20	4.0	8
		2015 Volkswagen	AG	S7	VGA 19	4.0	8
		2015 Volkswagen	AG	S8	VGA 9	4.0	8

	2015	Volkswagen Group of	SQ5	VGA	69	3.0	6
	2015	Volkswagen Group of	TT Coupe quattro	VGA	2	2.0	4
	2015	Volkswagen Group of	TT Roadster quattro	VGA	3	2.0	4
	2015	Volkswagen Group of	Continental GT	VGA	24	4.0	8
	2015	Volkswagen Group of	Continental GT	VGA	43	6.0	12
	2015	Volkswagen Group of	Continental GT Convertible	VGA	22	4.0	8
	2015	Volkswagen Group of	Continental GT Convertible	VGA	45	6.0	12
	2015	Volkswagen Group of	Flying Spur	VGA	23	4.0	8
	2015	Volkswagen Group of	Flying Spur	VGA	44	6.0	12
	2015	Volkswagen Group of	Mulsanne	VGA	61	6.8	8
	2015	Volkswagen Group of	Veyron	VGA	60	8.0	16
Duplicate eY	2015	Volkswagen Lamborghini	Aventador	VGA	52	6.5	12
Duplicate eY	2015	Volkswagen Lamborghini	Aventador	VGA	54	6.5	12
	2015	Volkswagen Group of	Aventador Roadster	VGA	53	6.5	12
	2015	Volkswagen Group of	Huracan	VGA	25	5.2	10
	2015	Volkswagen Volkswagen	Beetle	VGA	79	1.8	4
	2015	Volkswagen Volkswagen	Beetle	VGA	78	1.8	4
	2015	Volkswagen Volkswagen	Beetle	VGA	81	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	95	2.0	4
	2015	Volkswagen Volkswagen	Beetle	VGA	83	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	91	2.0	4
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	80	1.8	4
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	82	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	96	2.0	4
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	84	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	92	2.0	4
	2015	Volkswagen Volkswagen	CC	VGA	58	2.0	4
	2015	Volkswagen Volkswagen	CC	VGA	59	2.0	4
	2015	Volkswagen Volkswagen	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen Volkswagen	Eos	VGA	36	2.0	4
	2015	Volkswagen Volkswagen	Golf	VGA	103	1.8	4
	2015	Volkswagen Volkswagen	Golf	VGA	85	1.8	4
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	100	2.0	4
	2015	Volkswagen Volkswagen	GTI	VGA	1	2.0	4
	2015	Volkswagen Volkswagen	GTI	VGA	8	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	98	1.8	4
	2015	Volkswagen Volkswagen	Jetta	VGA	97	1.8	4
	2015	Volkswagen Volkswagen	Jetta	VGA	93	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	102	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	99	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	86	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	94	2.0	4
	2015	Volkswagen Volkswagen	Passat	VGA	90	1.8	4
	2015	Volkswagen Volkswagen	Passat	VGA	88	1.8	4
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	89	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	87	2.0	4
	2015	Volkswagen Volkswagen	Passat	VGA	55	3.6	6
	2015	Volkswagen Volkswagen	Tiguan	VGA	39	2.0	4
	2015	Volkswagen Volkswagen	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Touareg	VGA	13	3.0	6
	2015	Volkswagen Volkswagen	Touareg	VGA	57	3.6	6

Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	31	43	36				41.0359	61.6186	48.2955
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.6000	39.4000	31.1546
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995

Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
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Auto(S8)	14	24	17	17.3000	31.8000	21.7662
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Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	10	18	13	12.6000	25.2000	16.2581
Auto(AM-S	10	17	13	12.5000	22.7000	15.6684
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S6)	31	41	34	40.2000	57.8000	46.5830
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S6)	30	40	34	39.7000	56.5000	45.8327
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(S6)	25	36	29	32.5000	51.1000	38.8661
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	31	43	36	41.0359	61.6186	48.2955
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(S6)	25	37	30	32.7401	52.6000	39.4414
Manual(M5)	25	37	29	32.3787	52.4790	39.1216
Auto(AM-S6)	24	32	27	29.5595	44.4600	34.8093
Auto(AM-S6)	31	45	36	41.3000	64.1000	49.1703
Auto(S6)	23	34	26	28.7000	47.5000	34.9193
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Manual(M6)	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M5)	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S6)	30	42	34	38.7000	59.8000	46.0046
Manual(M6)	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

ype Descriptor field to one entry. Please revise Verify as needed.
ype Descriptor field to one entry. Error - sales = 1~5 vehicles. Please revise Verify to call EPA to explain. Please del

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
31.1996	43.0359	35.6064		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable		8	(e.g. C
21.5783	30.5883	24.8755		TC	Turbocharged	SA	Semi-Automatic		8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual		6	
19.8843	28.2637	22.9455		TC	Turbocharged	SA	Semi-Automatic		8	
21.5783	30.5883	24.8755		TC	Turbocharged	SA	Semi-Automatic		8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual		6	
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable		8	(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic		8	
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic		8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic		8	
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic		8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic		8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic		8	
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic		8	
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic		8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic		8	
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic		8	
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic		8	
20.9913	28.1265	23.6964		TC	Turbocharged	SA	Semi-Automatic		8	
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic		6	
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic		6	
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic		8	
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic		8	
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic		8	
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic		8	
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic		8	
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic		8	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual		6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual		6	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual		6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual		6	
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7		(e.g. Au
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic		8	
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6		(e.g. Au
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7		(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual		6	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7		(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual		6	
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7		(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7		(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7		(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic		8	

16.7285	23.6581	19.2682	SC	Supercharged	GA	Semi-Automatic	8
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	GA	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	GA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	GA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	GA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	GA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	GA	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	GA	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7
10.6055	18.4729	12.7856	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7
9.7957	16.2453	11.9264	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
14.0224	20.0427	16.2140	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
24.7637	32.6943	27.7980	TC	Turbocharged	GA	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.6516	40.5292	34.4273	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
30.5143	40.5292	34.3319	TC	Turbocharged	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	GA	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.3081	39.6674	33.9083	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	M	Manual	6
29.6183	40.1317	33.5766	TC	Turbocharged	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	GA	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
25.2640	36.0643	29.1989	TC	Turbocharged	GA	Semi-Automatic	6
25.3353	37.0021	29.5244	TC	Turbocharged	M	Manual	5
31.1996	43.0359	35.6064	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	M	Manual	6
25.4066	37.0689	29.5967	TC	Turbocharged	GA	Semi-Automatic	6
25.1926	37.0021	29.4176	TC	Turbocharged	M	Manual	5
23.5744	31.8670	26.7012	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
31.4045	44.6752	36.2501	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.5269	33.6412	26.4608	NA	Naturally Aspirated	GA	Semi-Automatic	6
24.6629	33.9684	28.1307	NA	Naturally Aspirated	M	Manual	5
22.8950	32.6159	26.4413	TC	Turbocharged	M	Manual	6
24.3335	35.7288	28.4112	TC	Turbocharged	GA	Semi-Automatic	6
24.1899	35.2585	28.1693	TC	Turbocharged	M	Manual	5
29.6183	41.8508	34.1040	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
29.8256	43.5614	34.7575	TC	Turbocharged	M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	GA	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	GA	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	GA	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	GA	Semi-Automatic	8

eter from the database if vehicles are not offered for sale in the U.S. Please revise. Verify as needed.

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0VAL		20		DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		389	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV06.3VUM	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT02.0AUH	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAT03.0NU3		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT03.0ALT	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAJ03.0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
tomated Manual with paddles)		A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
tomated Manual with paddles)		A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAJ02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	10		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAJ02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	Unleaded Recommended	Gallon	Not exempt			86	12		
MPG	Unleaded Required	Gallon	Not exempt			86	12		
MPG	Unleaded Recommended	Gallon	Not exempt	79	10				
MPG	Unleaded Required	Gallon	Not exempt	79	10				
MPG	Unleaded Recommended	Gallon	Not exempt			86	10		
MPG	Unleaded Recommended	Gallon	Not exempt			91	12		
MPG	Unleaded Required	Gallon	Not exempt			91	12		
MPG	Unleaded Recommended	Gallon	Not exempt			91	12		
MPG	Unleaded Recommended	Gallon	Not exempt	81	10				
MPG	Unleaded Recommended	Gallon	Not exempt	84	12				
MPG	Unleaded Required	Gallon	Not exempt	84	12				
MPG	Unleaded Recommended	Gallon	Not exempt			98	16		
MPG	Unleaded Recommended	Gallon	Not exempt			98	16		
MPG	Unleaded Recommended	Gallon	Not exempt			98	16		
MPG	Ultra (15 ppm, max gal)	Gallon	Not exempt			98	16		
MPG	Unleaded Recommended	Gallon	Not exempt					94	25
MPG	Ultra (15 ppm, max gal)	Gallon	Not exempt					94	25
MPG	Unleaded Recommended	Gallon	Not exempt			100	15		
MPG	Unleaded Required	Gallon	Not exempt			100	15		
MPG	Ultra (15 ppm, max gal)	Gallon	Not exempt			107	15		
MPG	Unleaded Recommended	Gallon	Not exempt			107	15		
MPG	Unleaded Required	Gallon	Not exempt			107	15		
MPG	Unleaded Recommended	Gallon	Not exempt			107	15		
MPG	Unleaded Recommended	Gallon	Not exempt			90	28		
MPG	Unleaded Required	Gallon	Not exempt					84	17
MPG	Unleaded Recommended	Gallon	Not exempt					84	17
MPG	Unleaded Recommended	Gallon	Truck						
MPG	Unleaded Required	Gallon	Truck						
MPG	Ultra (15 ppm, max gal)	Gallon	Truck						
MPG	Unleaded Recommended	Gallon	Truck						
MPG	Ultra (15 ppm, max gal)	Gallon	Truck						
MPG	Unleaded Recommended	Gallon	Truck						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt						
MPG	Unleaded Recommended	Gallon	Not exempt	84	13				
MPG	Unleaded Recommended	Gallon	Not exempt	81	10				
MPG	Unleaded Recommended	Gallon	Not exempt					94	25
MPG	Unleaded Recommended	Gallon	Not exempt			86	10		
MPG	Unleaded Recommended	Gallon	Not exempt			90	13		
MPG	Unleaded Required	Gallon	Not exempt			90	13		
MPG	Unleaded Recommended	Gallon	Not exempt	84	13				
MPG	Unleaded Recommended	Gallon	Not exempt	84	13				
MPG	Unleaded Recommended	Gallon	Not exempt	81	10				
MPG	Unleaded Recommended	Gallon	Not exempt			98	16		
MPG	Unleaded Recommended	Gallon	Not exempt					94	25
MPG	Unleaded Recommended	Gallon	Not exempt			100	15		

MRG	miles per gallon	Truck						
MRG	miles per gallon	Not exempt	74	13				
MRG	miles per gallon	Not exempt						
MRG	miles per gallon	Not exempt	89	11				
MRG	miles per gallon	Not exempt	89	11				
MRG	miles per gallon	Not exempt	86	7				
MRG	miles per gallon	Not exempt	86	7				
MRG	miles per gallon	Not exempt	102	13				
MRG	miles per gallon	Not exempt	102	13				
MRG	miles per gallon	Not exempt			101	11		
MRG	miles per gallon	Not exempt						
MRG	miles per gallon	Not exempt						
MRG	miles per gallon	Not exempt						
MRG	miles per gallon	Not exempt						
MRG	miles per gallon	Not exempt						
MRG	miles per gallon	Not exempt					85	15
MRG	miles per gallon	Not exempt					85	15
MRG	miles per gallon	Not exempt					85	15
MRG	miles per gallon	Not exempt					85	15
MRG	miles per gallon	Not exempt					85	15
MRG	miles per gallon	Not exempt					85	15
MRG	miles per gallon	Not exempt	81	7				
MRG	miles per gallon	Not exempt	81	7				
MRG	miles per gallon	Not exempt	81	7				
MRG	miles per gallon	Not exempt	81	7				
MRG	miles per gallon	Not exempt	81	7				
MRG	miles per gallon	Not exempt	94	13				
MRG	miles per gallon	Not exempt	94	13				
MRG	miles per gallon	Not exempt	94	13				
MRG	miles per gallon	Not exempt	77	11				
MRG	miles per gallon	Not exempt					93	16
MRG	miles per gallon	Not exempt					93	16
MRG	miles per gallon	Not exempt					93	16
MRG	miles per gallon	Not exempt					93	16
MRG	miles per gallon	Not exempt					93	16
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			94	16		
MRG	miles per gallon	Not exempt			102	16		
MRG	miles per gallon	Not exempt			102	16		
MRG	miles per gallon	Not exempt			102	16		
MRG	miles per gallon	Not exempt			102	16		
MRG	miles per gallon	Not exempt			102	16		
MRG	miles per gallon	Truck						
MRG	miles per gallon	Truck						
MRG	miles per gallon	Truck						
MRG	miles per gallon	Truck						

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
1550	1550	hwy label value correction							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	eng code correction	15	22	18				19.5
2200	2200								
2500	2500	eng code correction	14	20	16				17.4
2300	2300	eng code correction	15	22	18				19.5
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2400	2400	engine code	15	corrected	and applicable data added				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							

3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4400	4400				
4750	4750				
3550	3550	Release date change			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1800	1800				
1750	1750				
1550	1550	hwy label value corrected			
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1750	1750				
1800	1800	fuel consumption and CO2 unadj unrounded corrected			
2100	2100				
1550	1550	release date change			
2000	2000				
1900	1900				
2200	2200				
1900	1900	rounded adjusted highway CO2 rounding error corrected			
1900	1900				
1650	1650	EPA confirmatory tests numbers for city highway US06 now included, no label value changes			
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

							Alternative Fuel		
Hwy2 Unr	Comb2 Unr	Hwy2 Unr	Comb2 Unr	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit	

SB.

on changed to #1 for 1.8L engine code CNSB
L engine code CNTC.
ed to #2 for 2.0L engine code CNTC, GHG rating corrected

30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	MPG	miles per gallon
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E85)	MPG	miles per gallon
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	MPG	miles per gallon
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E85)	MPG	miles per gallon
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E85)	MPG	miles per gallon

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompact Cars
					2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
2600	400	281	347	2600	SIDI; FFV;	2	24	Compact Cars
				SIDI;	2	24		Compact Cars
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompact Cars
2600	400	281	347	2600	SIDI; FFV;	2	23	Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Station Wag
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	21		Two Seaters
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	24		Compact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	23		Subcompact Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars
				SIDI;	2	25		Midsize Cars

					SIDI;	2	231	Small SUV 4WD
or engine code CDMA and all TT models.					SIDI;	2	23	Subcompact Cars
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seate
						2	21	Two Seate
						2	21	Two Seaters
					SIDI & PFI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						1	14	Compact Cars
						1	14	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
						2	25	Midsize Cars
						2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

ac	Car/Truck	Calc Appr	Sales	Release D	EPA FE Label Dataset ID	Unique La	Label Rec	Relabel	Relabel D
	car	Vehicle Specific 5-cycle	2/25/2014		16011	N	N		
	car	Derived 5-cycle label	7/28/2014		16483	N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		16013	N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		16012	N	N		
	car	Vehicle Specific 5-cycle	1/15/2014		16197	N	N		
	car	Derived 5-cycle label	6/9/2014		15670	N	N		
	car	Derived 5-cycle label	6/9/2014		16311	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15675	N	N		
	car	Derived 5-cycle label	6/9/2014		16313	N	N		
	car	Derived 5-cycle label	6/9/2014		16312	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15676	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15673	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15674	N	N		
	car	Derived 5-cycle label	6/9/2014		16062	N	N		
	car	Vehicle Specific 5-cycle	6/10/2014		15458	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16061	N	N		
	car	Vehicle Specific 5-cycle	6/10/2014		15459	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15647	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15385	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15456	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15648	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15386	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15442	N	N		
	cars	Derived 5-cycle label	6/9/2014		16217	N	N		
	car	Derived 5-cycle label	8/4/2014		16057	N	N		
	car	Vehicle Specific 5-cycle	8/4/2014		15650	N	N		
		Derived 5-cycle label	6/9/2014		16034	N	N		
		Vehicle Specific 5-cycle	6/9/2014		16060	N	N		
		Vehicle Specific 5-cycle	6/10/2014		15460	N	N		
		Vehicle Specific 5-cycle	6/9/2014		15999	N	N		
	D	Vehicle Specific 5-cycle	6/12/2014		15408	N	N		
	D	Derived 5-cycle label	6/9/2014		15711	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15493	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15497	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15601	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15598	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15492	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15496	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15600	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15597	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15589	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		15590	N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15577	N	N		
	car	Vehicle Specific 5-cycle	8/4/2014		15651	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16064	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16067	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16065	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16068	N	N		
	car	Vehicle Specific 5-cycle	6/9/2014		16066	N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15576	N	N		
	car	Vehicle Specific 5-cycle	6/12/2014		15575	N	N		
	car	Vehicle Specific 5-cycle	5/15/2014		15400	N	N		

	Vehicle Specific 5-cycle label	6/9/2014	16059	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15682	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15681	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Derived 5-cycle label	8/25/2014	16388	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	8/25/2014	16339	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Derived 5-cycle label	8/25/2014	16389	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Derived 5-cycle label	8/25/2014	16340	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16492	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Derived 5-cycle label	7/28/2014	16482	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Derived 5-cycle label	8/25/2014	16429	N	N
car	Derived 5-cycle label	8/25/2014	16468	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16380	N	N
car	Derived 5-cycle label	8/4/2014	16485	N	N
car	Derived 5-cycle label	8/25/2014	16450	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16381	N	N
car	Derived 5-cycle label	7/14/2014	16393	N	N
car	Derived 5-cycle label	7/14/2014	16273	N	N
car	Derived 5-cycle label	7/14/2014	16449	N	N
car	Derived 5-cycle label	7/28/2014	16283	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	N	CRUA = Audi A3, VW	Y	Golf, Jetta Engine Co	N	de CVCA = VW Passat, Beetle, Beetle C	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	S VARIABLE VALVE TIMING	Audi Valvetronic
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, wh	en Deactivation of cylinders 2, 3, 5	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8 Deactivation of cylinders 2, 3, 5 and 8 by means of Start Stop Technology, when the intake and exhaust cam timing is					
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, wh	en Deactivation of cylinders 2, 3, 5	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8 Deactivation of cylinders 2, 3, 5 and 8 by means of Start Stop Technology, when the intake and exhaust cam timing is					
N	N	Engine Code	Y	CTNA with 12 cylinder	Deactivation	of intake and	Exhaust cam timing is electronically con		
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUC	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hybrid	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y		CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y		Continuously	intake and exhaust cam adjustment	
N	N	Engine Code	N	: CFS	Y		Continuously	intake and exhaust cam adjustment	
N	N	Engine Code	Y	CRDB (RS7)	Deactivation	of cylinders 2, 3, 5 and 8 by means of Start Stop Technology, when the intake and exhaust cam timing is			
N	N	Engine Code	N	CYFB - Audi S3	Y		CONTINUOU	SLY VARIABLE VALVE TIMING -	Audi Valve System - Exhaust
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	S VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinders 2, 3, 5 and 8 by means of Start Stop Technology, when the intake and exhaust cam timing is			
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinders 2, 3, 5 and 8 by means of Start Stop Technology, when the intake and exhaust cam timing is			
N	N	Engine Code	Y	CYCA. 6	Deactivation	of cylinders 2, 3, 5 and 8 by means of Start Stop Technology, when the intake and exhaust cam timing is			

| | | |

evice Desc	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit

onv.

alves to ensure valve lift before the valves are opened), the fuel injection and ignition for deactivated cylinders is

alves to ensure valve lift before the valves are opened), the fuel injection and ignition for deactivated cylinders is
tolled and hydraulically adjusted.

1	Lithium Ion	266	5.00	37.0	On-Board

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ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves to ensure valve lift before the valves are opened), the fuel injection and ignition for deactivated cylinders is
valves only

alves to ensure valve lift before the valves are opened), the fuel injection and ignition for deactivated cylinders is
alves to ensure valve lift before the valves are opened), the fuel injection and ignition for deactivated cylinders is
alves to ensure valve lift before the valves are opened), the fuel injection and ignition for deactivated cylinders is

alves on a single camshaft. The first valve lift profile is (all valves designed), the second one is for early activation and the third one for deactivation as described
ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile is (all valves designed), the second one is for early activation and the third one for deactivation as described
ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile is (all valves designed), the second one is for early activation and the third one for deactivation as described
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.
ECHANICAL-HYDRAULIC
Configuration is in the Bugati Veyron and Grand Sport.
VALVED CONTROL
VALVED CONTROL
D CONTINUOUSLY VVT
ECHANICAL-HYDRAULIC
AMS
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controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

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controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
Electrical Regen Brake	Both	Y						1	AC Induction
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									
ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km ed above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km									

esc above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

esc above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

esc above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W40 VW 50501
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
		40		GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /

	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40
	GDI	Spark Ignition Direct Injection	N	5W40
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
	MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
	MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
	MFI	Multipoint/s	N	5W30 VW
	MFI	Multipoint/s	N	5W30 VW
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
	GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
	MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N 50500	No	Auto(AM-S7)	Auto(AM-S7)						
N 50500	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N 50500	No	Auto(AM-S7)	Auto(AM-S7)						
N 50500	No	Manual(M6)	Manual(M6)						
N 50700	No	Auto(AM-S7)	Auto(AM-S7)						
N 50700	No	Auto(AM-S7)	Auto(AM-S7)						
N 50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N 50700	No	Auto(AM-S7)	Auto(AM-S7)						
N 50700	No	Auto(AM-S7)	Auto(AM-S7)						
N 50700	No	Auto(S8)	Auto(S8)						

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N50700	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
JVW50500	No	Auto(S8)	Auto(S8)	
N 50500	No	Auto(AM-S7)	Auto(AM-S7)	
Y50700	Yes	Auto(AM-S	Auto(AM-S	
N50700	No	Auto(AM-S	Auto(AM-S	VENENO
Y50700	Yes	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Jetta Base
N	No	Manual(M5)	Manual(M5)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[redacted]	EPA Calculated Gas G	[redacted]	[redacted] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.0APA	9		
48.3	[redacted]	8	8	FVGAV02.0VAL	5		
36.2	[redacted]	7	7	FVGAV02.0APA	9		
34.3	[redacted]	6	6	FVGAV02.0APA	9		
35.2	[redacted]	7	7	FVGAV02.0APA	9		
35.4	[redacted]	7	7	FVGAV02.0AUB	5		
32.7	[redacted]	6	6	FVGAJ02.0AUF	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
30.1	[redacted]	5	5	FVGAJ02.0AUF	5		
32.7	[redacted]	6	6	FVGAJ02.0AUF	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
36.9	[redacted]	7	7	FVGAV02.0AUB	5		
30.0	[redacted]	5	5	FVGAV02.0AUB	5		
28.1	[redacted]	5	5	FVGAJ03.0AUD	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
27.9	[redacted]	5	5	FVGAJ03.0AUD	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
28.0	[redacted]	5	5	FVGAV04.0NUA	5		
36.9	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
27.6	[redacted]	5	5	FVGAV04.0NUA	5		
21.1	[redacted]	4	4	FVGAV06.3VUM	5		
31.2	[redacted]	6	6	FVGAJ02.0AUF	5		
30.0	[redacted]	5	5	FVGAV02.0AUA	5		
29.5	[redacted]	5	5	FVGAV02.0AUA	5		
29.6	[redacted]	5	5	FVGAJ02.0AUF	5		
27.2	[redacted]	5	5	FVGAJ03.0AUD	5		
34.3	[redacted]	7	5	FVGAJ03.0NU4	5		
34.0	[redacted]	6	6	FVGAT02.0AUH	5		
28.1	[redacted]	5	4	FVGAT03.0NU3	5		
23.1	[redacted]	4	4	FVGAT03.0ALT	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
22.8	[redacted]	4	4	FVGAV04.2NLB	5		
22.6	[redacted]	4	4	FVGAV04.2NLB	5		
24.1	[redacted]	4	4	FVGAV04.0NUA	5		
33.2	[redacted]	6	6	FVGAV02.0AUA	5		
26.9	[redacted]	5	5	FVGAJ03.0AUD	5		
23.5	[redacted]	5	5	FVGAJ03.0AUD	5		
26.9	[redacted]	5	5	FVGAJ03.0AUD	5		
23.5	[redacted]	5	5	FVGAJ03.0AUD	5		
26.4	[redacted]	5	5	FVGAJ03.0AUD	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.0	[redacted]	5	5	FVGAV04.0NUA	5		

24.9	[redacted]	4	4 FVGAJ03.0AUD	5
33.3		6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.	5
15.8		1	1 FVGAV06.	5
14.6		1	1 FVGAV06.5LLR	5
20.0		3	3 FVGAV05.2NLE	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
46.6		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
46.4		8	7 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
45.8		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
45.3		8	7 FVGAV02.0VAL	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
38.9		7	7 FVGAV02.0APA	9
39.3		7	7 FVGAV02.0APA	9
48.3		8	8 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
39.4		7	7 FVGAV02.0VPD	7
38.4		7	7 FVGAV02.0VPD	7
34.8		7	7 FVGAV02.0VPD	7
49.2		8	8 FVGAV02.0VAL	5
34.9		6	6 FVGAV02.0VUC	5
35.9		7	7 FVGAV02.0VUC	5
34.0		6	6 FVGAV02.0VPD	7
37.7		7	7 FVGAV02.0VPD	7
37.3		7	7 FVGAV02.0VPD	7
46.2		8	7 FVGAV02.0VAL	5
46.9		8	7 FVGAV02.0VAL	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5

[illegible]	You Save $	You Spend $	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	3250		326	236	285			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	410	290	356			
	0		398	277	343			
		1500	446	314	386			
		1000	410	290	356			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1000	421	315	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2000	496	347	429			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		2500	488	321	413			
		3250	519	341	439			
		2500	488	321	413			
		3250	519	341	439			
		2500	500	341	428			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			

	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	11000	831	523	692
	12750	902	547	742
	6750	629	441	544
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
750		358	271	319
750		355	258	311
2250		347	238	298
2000		351	239	301
1000		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	[illegible] Combined CO2 value to show on PHEV label	240V Char	120V Char PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5
247.7	165.1	210.5	325.6	236.3	285.4
289.0	188.0	243.6	362.1	255.5	314.1
305.0	200.0	257.8	378.6	280.1	334.3
294.0	198.0	250.8	366.0	271.0	323.2
292.0	199.0	250.2	373.7	280.2	331.6
323.0	206.0	270.4	410.3	289.6	356.0
321.2	202.4	267.7	398.0	276.6	343.4
353.0	224.0	295.0	445.7	313.9	386.4
323.0	206.0	270.4	410.3	289.6	356.0
321.2	202.4	267.7	398.0	276.6	343.4
282.0	189.0	240.2	360.0	272.0	320.4
358.0	219.0	295.4	452.0	306.0	386.3
383.5	233.0	315.8	481.7	326.0	411.6
331.0	194.0	269.4	415.7	267.3	348.9
385.0	236.0	318.0	492.9	320.9	415.6
331.0	194.0	269.4	415.7	267.3	348.9
376.5	225.0	308.3	473.4	302.9	396.7
391.0	224.0	315.9	483.9	299.0	400.7
339.0	198.0	275.6	425.6	280.1	360.1
376.5	225.0	308.3	473.4	302.9	396.7
396.0	226.0	319.5	492.3	309.7	410.1
515.0	310.0	422.8	640.3	403.3	533.6
332.0	225.0	283.9	420.9	315.2	373.3
357.5	223.0	297.0	451.0	312.5	388.7
357.0	230.0	299.9	445.6	315.7	387.1
358.0	230.0	300.4	451.6	321.9	393.2
390.0	251.0	327.4	496.0	347.0	429.0
348.0	231.0	295.4	430.5	328.5	384.6
380.0	223.0	309.4	369.0	298.0	337.0
446.0	260.0	362.3	541.0	369.0	463.6
458.0	295.0	384.6	569.6	409.5	497.6
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
466.0	296.0	389.5	562.0	379.0	479.6
463.0	307.0	392.8	558.0	398.0	486.0
467.0	253.0	370.7	573.0	336.1	466.4
311.0	214.0	267.4	381.4	289.2	339.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5

427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
708.0	392.0	565.8	831.0	523.0	692.4
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3
272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT_
N		3.7	3.7			
N		2.8	2.8			
N		3.6	3.6			
N		3.8	3.8			
N		3.7	3.7			
N		3.7	3.7			
N		4.0	4.0			
N		3.8	3.8			
N		4.3	4.3			
N		4.0	4.0			
N		3.8	3.8			
N		3.6	3.6			
N		4.3	4.3			
N		4.5	4.5			
N		3.4	3.4			
N		4.8	4.8			
N		3.4	3.4			
N		4.5	4.5			
N		4.5	4.5			
N		3.6	3.6			
N		4.5	4.5			
N		4.5	4.5			
N		5.9	5.9			
N		4.2	4.2			
N		4.3	4.3			
N		4.3	4.3			
N		4.3	4.3			
N		4.8	4.8			
N		3.7	3.7			
N		3.8	3.8			
N		4.5	4.5			
N		5.6	5.6			
N		5.9	5.9			
N		7.1	7.1			
N		6.2	6.2			
N		7.1	7.1			
N		5.9	5.9			
N		7.1	7.1			
N		6.2	6.2			
N		7.1	7.1			
N		5.6	5.6			
N		5.6	5.6			
N		5.3	5.3			
N		3.8	3.8			
N		4.8	4.8			
N		5.0	5.0			
N		4.8	4.8			
N		5.0	5.0			
N		4.8	4.8			
N		5.0	5.0			
N		5.0	5.0			
N		5.0	5.0			

N	5.3	5.3
N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	7.7	7.7
N	8.3	8.3
N	6.2	6.2
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	3.7	3.7
N	4.0	4.0
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.4	3.4
N	3.3	3.3
N	2.8	2.8
N	3.6	3.6
N	3.6	3.6
N	3.3	3.3
N	3.4	3.4
N	3.7	3.7
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	3.8	3.8
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

| [illegible] | [illegible] | [illegible] |

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]; Yang, Ching-Shih[Yang.Ching-Shih@epa.gov]
From: Allen, Gregory (EEO)
Sent: Thur 7/10/2014 7:47:15 PM
Subject: RE: Ex. 7

Hello Jim,

That's my fault, I should have checked those earlier when I revised the originals.

The changes have been made and the corrected VGA-0100 data has been submitted.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 10, 2014 3:32 PM
To: Allen, Gregory (EEO)
Cc: Giles, Michael (EEO); Rodgers, William (EEO); Yang, Ching-Shih
Subject: RE: Ex. 7

Greg, Bill checked the revised files and while the initial errors are fixed, he found a couple more errors near the end. Apparently the checking software stops after a certain number of errors so it didn't see them.

Ex. 7 Bill suggested duplicating what you did a Ex. 7 ince they are repeats from bag 1.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Thursday, July 10, 2014 11:47 AM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Rodgers, William (EEO)
Subject: RE: I Ex. 7

Hello Jim,

Ex. 7 Please let us know if they have any other issues with the datasets.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Giles, Michael (EEO)
Sent: Wednesday, July 09, 2014 8:55 AM
To: Allen, Gregory (EEO)
Subject: FW: Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, July 09, 2014 8:50 AM
To: Giles, Michael (EEO)
Subject: Ex. 7

Mike, Bill ran the Ex. 7 Ex. 7
outside tolerance. I think that has to get corrected before he can load them into their system.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Courtois, William
Sent: Tuesday, July 08, 2014 9:23 AM
To: Yang, Ching-Shih
Cc: Haynes, Ben; Snyder, Jim
Subject: Ex. 7

Folks,

Ex. 7 ift points with (time, speed) values that do not align with drive schedule (time, speed) values.

See the attached files,

Bill Courtois

From: Yang, Ching-Shih
Sent: Monday, July 07, 2014 1:31 PM
To: Courtois, William
Cc: Haynes, Ben; Snyder, Jim
Subject: RE: Need shift schedules

Attached are the XML shift schedule files.

Thanks, Ching-shih

From: Snyder, Jim
Sent: Monday, July 07, 2014 1:30 PM
To: Yang, Ching-Shih
Cc: Haynes, Ben; Courtois, William
Subject: RE: Need shift schedules

Ching-Shih, Bill, the Ex. 7 look okay to me. The first file is a single 18 hill LA4. It does not include the 3rd bag not transient portion after re-start . The 2nd file covers a double Highway test (prep and test).

-Jim

From: Yang, Ching-Shih
Sent: Monday, July 07, 2014 11:13 AM

To: Snyder, Jim
Cc: Haynes, Ben; Courtois, William
Subject: RE: Need shift schedules

Jim,

Ex. 7 in our system. I've attached the excel formats of the files for your review. Please let me know if and when it's good for me to send off to Bill.

Thanks, Ching-shih

From: Snyder, Jim
Sent: Monday, July 07, 2014 11:01 AM
To: Haynes, Ben; Yang, Ching-Shih
Cc: Courtois, William; Spieth, John; Peralta, Maria
Subject: RE: Need shift schedules

Please note that VW has encountered "logistical issues" with this vehicle. They are now saying it won't be available until after 28th. I also asked them if this is a new shift schedule or is it already in our system.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Haynes, Ben

Sent: Monday, July 07, 2014 9:23 AM
To: Snyder, Jim; Yang, Ching-Shih
Cc: Courtois, William; Spieth, John; Peralta, Maria
Subject: Ex. 7

I have a test request for the following vehicle:

VGA - Volkswagen Group

VW370 40145 /15 – FTP 0100 and HWA 0101

This vehicle can be scheduled for testing the middle of next week 07/17/14 if the shift schedules can be put in place.

Thanks for your help in advance.

Ben Haynes

Technical Information Specialist

TATD/VTC

Supporting the USEPA through Cooperative Agreement

under the SEE Program

Scheduling Office

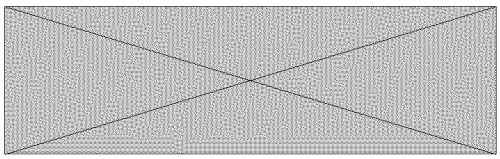
734-214-4261

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 7/10/2014 7:48:57 PM
Subject: P.M. NEWSCAST: Another executive opening at Cadillac | Tesla safety surprise | Kia's audio tuneup | UAW's local VW plan

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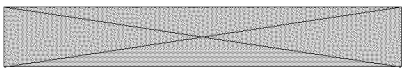
July 10, 2014



Help wanted at Caddy »

Tesla safety surprise »

Kia's audio tuneup »



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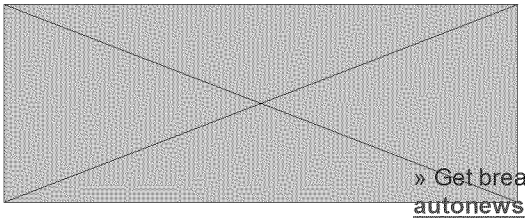
. .

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 7/10/2014 8:41:28 PM
Subject: DAILY: GM moves Cadillac chief Ferguson back to chief lobbying role | ZF makes bid for TRW that would create No. 2 global supplier | UAW creates 'Local 42' in Chattanooga

Today's most read story

UAW creates union local for VW workers in Tennessee

July 10, 2014



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TOP NEWS

GM moves Cadillac chief Ferguson back to chief lobbying role

3:23 pm U.S. ET | Jul 10

Bob Ferguson, the head of Cadillac since October 2012, is returning to his previous position as GM's top government lobbyist, effective immediately. ... » READ

TRW attracts takeover offer from ZF Friedrichshafen, report says

UPDATED: 7/10/14 4:15 pm ET - adds details, stock close

10:56 am U.S. ET | Jul 10

TRW Automotive, the world's biggest car-safety equipment supplier, has received a preliminary takeover approach from Germany's ZF Friedrichshafen AG, people with knowledge of the matter told Bloomberg. If completed, it would be the largest auto supplier takeover in seven years. ... » READ

UAW creates union local for VW workers in Tennessee

UPDATED: 7/10/14 4:28 pm ET
8:32 am U.S. ET | Jul 10

The UAW formed a union local to represent workers at VW's assembly plant in Chattanooga, where it lost a bitter organizing vote earlier this year. Membership in Local 42 will be voluntary and the unit will not have power to bargain on behalf of all employees at the plant, UAW officials said today. ... » READ

Ford creates Mulally engineering scholarship

3:04 pm U.S. ET | Jul 10

Ford is creating a $1 million scholarship program for engineering students in honor of former CEO Alan Mulally. Under the Alan Mulally Leadership in Engineering Scholarship program, Ford will award 10 onetime $10,000 scholarships annually to sophomore or junior engineering students at universities around the world. ... » READ

Ford says it remains committed to South Africa despite strikes

12:13 pm U.S. ET | Jul 10

Ford has a long-term commitment to South Africa, its regional head said, playing down any concerns about strikes that an engineering federation said had prompted the carmaker to consider pulling out of the country. ... » READ

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GABE NELSON

How UAW can leverage minority support in Chattanooga and elsewhere

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Bill Ford predicts 'radical transformation' of auto industry

Small cars to fuel production boom in Mexico

Automotive News names the Best Dealerships To Work For

Supplier price-fixing crackdown jolts Japan's business culture

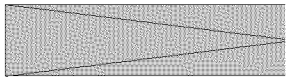
Jeep aims to boost future Wrangler's fuel economy

Honda recalls 175,000 hybrids in Japan due to software glitch

6:53 am U.S. ET | Jul 10

Bosch sees 2014 sales growth at top end of range

1:09 pm U.S. ET | Jul 10



UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

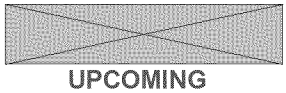
» Nov. 21 - Automobilwoche Kongress



UPCOMING WEBINARS

» July 30 - Marketing Market Price

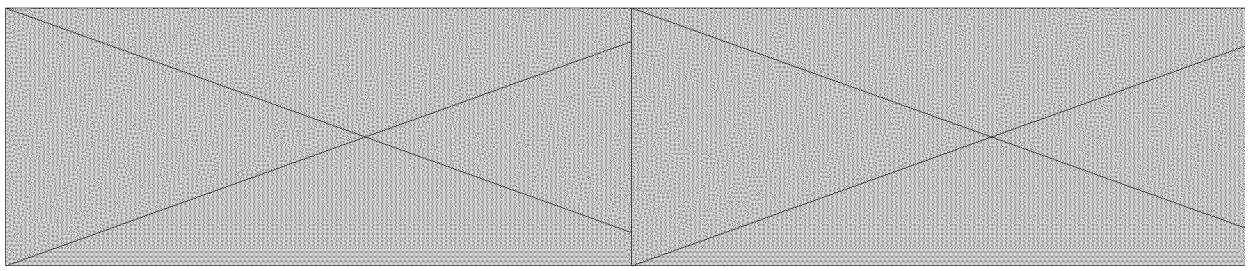
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UPCOMING WEBINARS

» July 16 - Plugging the Leaks in F&I: How

to Deal with
Inefficiencies that put
Profits at Risk



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. .

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 7/11/2014 10:22:15 AM
Subject: RE: 2015 FE Guide - data in Verify

Thanks Dave. I corrected index # 054 and the carline name 475 to Veneno Roadster (477). This should take care of the duplication. Everything else looks to be good.

RET

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, July 10, 2014 3:35 PM
To: Thomas, Richard (EEO)
Subject: 2015 FE Guide - data in Verify

Richard

Here's the data just after our macro ran. I haven't had time to clean it up for the Veneno carline name change, etc.

Dave

To: Charmley, William[charmley.william@epa.gov]; Ex. 7 @arb.ca.gov]; Ex. 7 @arb.ca.gov]; Ex. 7 @arb.ca.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Haugen, David[haugen.david@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Ex. 7 @arb.ca.gov]; Ex. 7 @arb.ca.gov]
From: Ex. 7 @ARB
Sent: Fri 7/11/2014 7:52:53 PM
S
a

Ex. 5

Thanks Bill.

Ex. 5

Ex. 7

From: Charmley, William [charmley.william@epa.gov]
Sent: Thursday, July 10, 2014 2:36 PM
To: Ex. 7 @ARB; Ex. 7 @ARB; Ex. 7 @ARB; Grundler, Christopher; Cook, Leila; Hengst, Benjamin; Simon, Karl; Haugen, David; Bunker, Byron
Subject: RE: Monthly ARB-OTAQ senior leadership conference call on Thursday, July 10: two follow-up action items

Dear all –

As a follow-up on two items we just discussed that I didn't have the answer with me.

Ex. 5

Ex. 5

Ex. 5

Thanks

Bill

From: Charmley, William
Sent: Tuesday, July 08, 2014 4:16 PM
To: Ex. 7 @arb.ca.gov; Ex. 7 @arb.ca.gov; Ex. 7 Grundler, Christopher; Cook, Leila; Hengst, Benjamin; Simon, Karl; Haugen, David; Bunker, Byron

Ex. 5

Dear all –

Our monthly coordination call is scheduled for this week on Thursday, July 10 at 4-5 eastern, 1-2 west coast time.

Attached is a first draft at an agenda. These are the items we did not get to last month. I also put them into this email.

Note that last month we decided we are NO LONGER DOING VIDEO – ONLY THE CALL-IN NUMBER. This means CARB will need to let their A/V team know to cancel the video-call, so they don't try to set it up, as I believe they have been initiating the video-call. The call-in number is in the attachment and listed below.

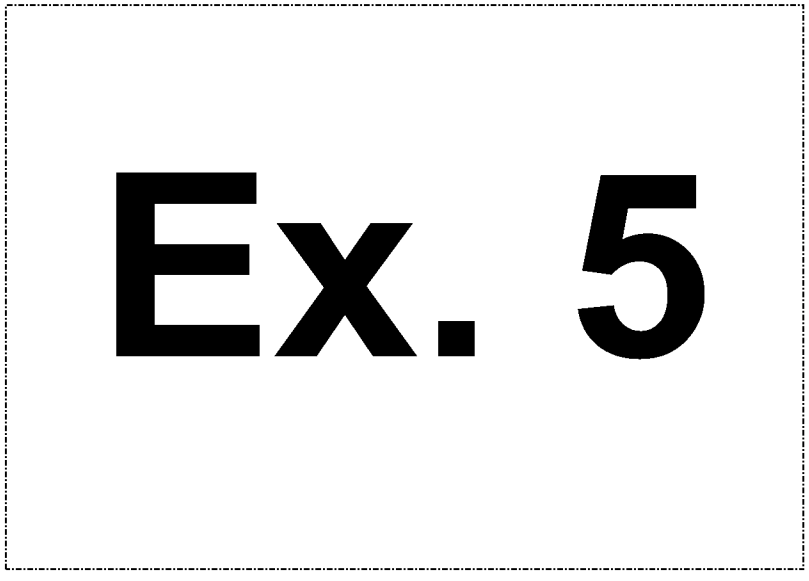
I know it is the summer time, and folks may be on vacation. Are we still good for this week's call?

Send around any comment you have by the end of the day Wednesday.

Thanks

Bill

DRAFT Agenda Items



Ex. 5

Upcoming Actions/Events of Potential Interest:

July 9/10 ICCT sponsored LD Vehicle Standards Workshop with Mexican Gov't

Non-Responsive

To: Good, David[good.david@epa.gov]; ross.gatzke@porsche.us[ross.gatzke@porsche.us]
Cc: walter.lewis@porsche.us[walter.lewis@porsche.us]
From: Good, David
Sent: Fri 7/11/2014 8:31:37 PM
Subject: RE: re: 2015 FE Guide - Errors in EPA's data base as of July 10, 2014
Porsche_2015 FEGuide-all rel dates-no-sales-7-10-2014.xlsx

Ross,

re: 2015 FE Guide - Errors in EPA's data base as of July 10, 2014

There is one last correction needed for the Panamera PHEV---plus, don't forget to send me a copy of the 2015 label.

Attached are the data in Verify as of July 10, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on July 15, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Porsche	Porsche	911 Carrer	PRX 102	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX 101	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX 110	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX 109	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX 112	3.4	6
		2015 Porsche	Porsche	911 Carrera 4	PRX Cabriolet 111	3.4	6
		2015 Porsche	Porsche	911 Carrera 4S	PRX 114	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX 113	3.8	6
Error: UnrcY		2015 Porsche	Porsche	911 Carrer	PRX 116	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX 115	3.8	6
		2015 Porsche	Porsche	911 Carrera S	PRX Cabriolet 104	3.4	6
		2015 Porsche	Porsche	911 Carrera S	PRX Cabriolet 103	3.4	6
		2015 Porsche	Porsche	911 Carrera 4S	PRX 106	3.8	6
		2015 Porsche	Porsche	911 Carrera S	PRX 105	3.8	6
		2015 Porsche	Porsche	911 Carrera 4S	PRX Cabriolet 108	3.8	6
		2015 Porsche	Porsche	911 Carrera S	PRX Cabriolet 107	3.8	6
		2015 Porsche	Porsche	911 GT3	PRX 531	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX 542	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX 540	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX 544	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX 543	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX 521	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX 523	3.8	6
		2015 Porsche	Porsche	Boxster	PRX 202	2.7	6
		2015 Porsche	Porsche	Boxster	PRX 201	2.7	6
		2015 Porsche	Porsche	Boxster GTS	PRX 224	3.4	6
		2015 Porsche	Porsche	Boxster GTS	PRX 223	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX 222	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX 221	3.4	6
		2015 Porsche	Porsche	Cayman	PRX 212	2.7	6
		2015 Porsche	Porsche	Cayman	PRX 211	2.7	6
		2015 Porsche	Porsche	Cayman GTS	PRX 234	3.4	6
		2015 Porsche	Porsche	Cayman GTS	PRX 233	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX 232	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX 231	3.4	6
		2015 Porsche	Porsche	Macan S	PRX 311	3.0	6
		2015 Porsche	Porsche	Macan Turbo	PRX 321	3.6	6
		2015 Porsche	Porsche	Panamera	PRX 601	3.6	6
		2015 Porsche	Porsche	Panamera 4	PRX 602	3.6	6
		2015 Porsche	Porsche	Panamera 4S	PRX 616	3.0	6
		2015 Porsche	Porsche	Panamera 4S	PRX Executive 617	3.0	6
		2015 Porsche	Porsche	Panamera GTS	PRX 621	4.8	8
		2015 Porsche	Porsche	Panamera S	PRX 611	3.0	6
PHEV; ErroY		2015 Porsche	Porsche	Panamera	PRX 641	3.0	6
PHEV; ErroY		2015 Porsche	Porsche	Panamera	PRX 641	3.0	6
		2015 Porsche	Porsche	Panamera	PRX 631	4.8	8
		2015 Porsche	Porsche	Panamera Turbo	PRX Executive 632	4.8	8
		2015 Porsche	Porsche	Panamera Turbo	PRX 636	4.8	8
		2015 Porsche	Porsche	Panamera Turbo	PRX S Executive 637	4.8	8

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Manual(M	19	27	22				24.0491	37.8468	28.7688
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Manual(M7)	19	26	22				23.5983	36.5997	28.0884
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Manual(M7)	19	27	22				23.6474	37.0494	28.2451
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Manual(M6)	19	26	22				24.3984	37.0000	28.8146
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Manual(M6)	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S7)	22	32	26				27.9000	44.9000	33.6298
Manual(M6)	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S7)	22	31	25				27.2967	43.0998	32.6906
Manual(M6)	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S7)	21	30	24				26.3000	41.9000	31.5932
Manual(M6)	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S7)	17	23	19				21.4471	31.6987	25.1000
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Auto(AM-S7)	15	24	18				19.1667	33.7481	23.7927
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19.1036	27.0590	22.0164		NA	Naturally A	M	Manual		7	
19.7713	26.8542	22.4340		NA	Naturally A	AMS	Automatec		7	
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18.4000	25.4000	21.0000		NA	Naturally A	AMS	Automatec		7	
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17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7	
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20.5000	29.6000	23.8000		NA	Naturally As	pirated	Manual		6	
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19.3636	26.4756	22.0261		NA	Naturally As	pirated	Manual		6	
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15.5885	24.1929	18.5588		NA	Naturally A	spirated	Automated	Manual- Selectable	7	(e.g. Au
17.4965	26.6685	20.7002		TC	Turbocharge	AMS	Automated	Manual- Selectable	7	(e.g. Au
22.7000	29.3000	25.2605		SC	Supercharg	AMS	Automated		8	
22.7000	29.3000	25.2605		SC	Supercharg	AMS	Automated		8	
15.4000	24.2000	18.4000		TC	Turbochar	AMS	Automatec		7	
15.3000	23.9000	18.3000		TC	Turbocharge	AMS	Automated	Manual- Selectable	7	(e.g. Au
15.4000	24.2000	18.4000		TC	Turbocharge	AMS	Automated	Manual- Selectable	7	(e.g. Au
15.3000	23.9000	18.3000		TC	Turbocharge	AMS	Automated	Manual- Selectable	7	(e.g. Au

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	Ma	R	2-Wheel D	FPRXV04.0	10			GP	Gasoline (F
N	N	R	2-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
N	N	4	4-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
tomated Ma	Ma	4	4-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
N	N	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Manual with paddles)	N	4	4-Wheel D	FPRXV04.	10			GP	Gasoline (I
N	N	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV04.0C91	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
N	N	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	4	4-Wheel D	FPRXV04.0	10			GP	Gasoline (F
tomated Ma	Ma	R	2-Wheel D	FPRXV02.7	10			GP	Gasoline (F
N	N	R	2-Wheel D	rive,	FPRXV02.7B81	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV02.7B81	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV02.7B81	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
N	N	R	2-Wheel D	rive,	FPRXV03.4B81	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXT03.6MCS	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXT03.6MT6	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV03.6PV6	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV03.6PV6	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV03.6PV6	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV03.6PV6	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV04.8PS8	10		GP	Gasoline (Premium
tomated Ma	Ma	R	2-Wheel D	rive,	FPRXV03.6PV6	10		GP	Gasoline (Premium
tomated Manual with paddles)	N	R	2-Wheel D	FPRXJ03.(	10		540	GP	Gasoline (I
tomated Manual with paddles)	N	R	2-Wheel D	FPRXJ03.(	10		540	GP	Gasoline (I
tomated Ma	Ma	4	All Wheel I	FPRXV04.8	10			GP	Gasoline (F
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV04.8PT8	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV04.8PT8	10		GP	Gasoline (Premium
tomated Ma	Ma	A	All Wheel D	rive,	FPRXV04.8PT8	10		GP	Gasoline (Premium

Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	68	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt	70	5				
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Not exempt						
MPG (Unleaded Recommended)	miles per gal	Truck						
MPG (Unleaded Recommended)	miles per gal	Truck						
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt			108	16		

Annual Fu	EPA Calcı	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2500	2500	911 Carrera A7							
2600	2600	911 Carrera M7							
2500	2500	911 Carrera 4 A7							
2600	2600	911 Carrera 4 M7							
2600	2600	911 Carrera 4 Cabriolet A7							
2600	2600	911 Carrera 4 Cabriolet M7							
2600	2600	911 Carrera 4S A7							
2700	2700	911 Carrera 4S M7							
2700	2700	911 Carrera 4S Cabriolet A7							
2700	2700	911 Carrera 4S Cabriolet M7							
2500	2500	911 Carrera Cabriolet A7							
2600	2600	911 Carrera Cabriolet M7							
2600	2600	911 Carrera S A7							
2600	2600	911 Carrera S M7							
2600	2600	911 Carrera S Cabriolet A7							
2600	2600	911 Carrera S Cabriolet M7							
3350	3350	911 GT3							
2600	2600	911 Targa A7							
2700	2700	911 Targa M7							
2700	2700	911 Targa S A7							
2700	2700	911 Targa S M7							
2850	2850	911 Turbo / Turbo Cabriolet							
2850	2850	911 Turbo S / Turbo S Cabriolet							
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
2600	2600	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2850	2850	Harmonic average of Start/Stop ON and OFF.							
3000	3000	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
1850	1850	All-Electric	53	51	52				36.9000
1850	1850	All-Electric	42	66	50				59.5000
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							

Hwy2	UnadjComb2	UrbCmb2	Unrd Hwy2	Unrd Cmb2	Unr Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit

rage of SS ON and SS OFF.
rage of SS ON and SS OFF.

35.7000	36.4000	52.8000	51.2000	52.1000	16	EL	Electricity	KW-HR/10	kilowatt-ho
94.5000	71.4000	41.6000	66.1000	50.0000	16	EL	Electricity	MPG	miles per g

Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	22	Minicompact Cars	
				SIDI;	2	21	Two Seate	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	22	Minicompa	
				SIDI;	2	21	Two Seate	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	21	Two Seaters	
				SIDI;	2	231	Small SUV 4WD	
				SIDI;	2	231	Small SUV 4WD	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
00 miles	950			SIDI; PHE	2	26	Large Cars	
	950			SIDI; PHE	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	
				SIDI;	2	26	Large Cars	

MC Car/Truck	Calc Appr	Sales Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Derived 5-cycle label	6/23/2014	16317	[redacted]	Y	N		
car	Derived 5-cycle label	6/23/2014	16316		Y	N		
car	Derived 5-cycle label	6/23/2014	16325		N	N		
car	Derived 5-cycle label	6/23/2014	16324		N	N		
car	Derived 5-cycle label	6/23/2014	16327		N	N		
car	Derived 5-cycle label	6/23/2014	16326		Y	N		
car	Derived 5-cycle label	6/23/2014	16329		N	N		
car	Derived 5-cycle label	6/23/2014	16328		Y	N		
car	Derived 5-cycle label	6/23/2014	16411		N	N		
car	Derived 5-cycle label	6/23/2014	16330		N	N		
car	Derived 5-cycle label	6/23/2014	16412		Y	N		
car	Derived 5-cycle label	6/23/2014	16318		Y	N		
car	Derived 5-cycle label	6/23/2014	16321		Y	N		
car	Derived 5-cycle label	6/23/2014	16320		Y	N		
car	Derived 5-cycle label	6/23/2014	16323		Y	N		
car	Derived 5-cycle label	6/23/2014	16322		Y	N		
car	Derived 5-cycle label	6/23/2014	16341		N	N		
car	Derived 5-cycle label	6/23/2014	16342		Y	N		
car	Derived 5-cycle label	6/23/2014	16391		Y	N		
car	Derived 5-cycle label	6/23/2014	16344		N	N		
car	Derived 5-cycle label	6/23/2014	16343		Y	N		
car	Derived 5-cycle label	6/23/2014	16337		N	N		
car	Derived 5-cycle label	6/23/2014	16338		N	N		
car	Derived 5-cycle label	6/23/2014	16231		N	N		
car	Derived 5-cycle label	6/23/2014	16229		N	N		
car	Derived 5-cycle label	6/23/2014	16250		Y	N		
car	Derived 5-cycle label	6/23/2014	16248		Y	N		
car	Derived 5-cycle label	6/23/2014	16238		Y	N		
car	Derived 5-cycle label	6/23/2014	16236		Y	N		
car	Derived 5-cycle label	6/23/2014	16232		N	N		
car	Derived 5-cycle label	6/23/2014	16230		N	N		
car	Derived 5-cycle label	6/23/2014	16251		Y	N		
car	Derived 5-cycle label	6/23/2014	16249		Y	N		
car	Derived 5-cycle label	6/23/2014	16239		Y	N		
car	Derived 5-cycle label	6/23/2014	16237		Y	N		
	Derived 5-cycle label	5/9/2014	15889		N	N		
	Derived 5-cycle label	5/9/2014	15890		N	N		
car	Derived 5-cycle label	6/16/2014	16105			N		
car	Derived 5-cycle label	6/16/2014	16107			N		
car	Derived 5-cycle label	6/16/2014	16110			N		
car	Derived 5-cycle label	6/16/2014	16111			N		
car	Derived 5-cycle label	6/16/2014	16112			N		
car	Derived 5-cycle label	6/16/2014	16109			N		
car	Plug-in Hybrid Label	7/3/2014	16420		Y	N		
car	Plug-in Hybrid Label	7/3/2014	16420		Y	N		
car	Derived 5-cycle label	6/9/2014	16039			N		
car	Derived 5-cycle label	6/9/2014	16040			N		
car	Derived 5-cycle label	6/9/2014	16041			N		
car	Derived 5-cycle label	6/9/2014	16042			N		

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V'Y			Porsche V'	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N	2TWC, 2HO	N	Y	Porsche V\Y			Porsche V\	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT			Porsche VVT	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT			Porsche VVT	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT			Porsche VVT	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT			Porsche VVT	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N	2TWC, 2HO	N2S(2), DFI	Y	Porsche VWT System			Porsche VVT System	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche V'Y			Porsche V'Battery(s)	
N	N		N	Y	Porsche V'Y			Porsche V'Battery(s)	
N	N		N	Y	Porsche V\Y			Porsche V\	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	
N	N		N	Y	Porsche VWT			Porsche VVT	

evice Desc	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
		1	Lithium Ion		471	75.00	67.1	Both On-B		
		1	Lithium Ion		471	75.00	67.1	Both On-B		

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
Electrical F		Both	N					1	DC Brushl
Electrical F		Both	N					1	DC Brushl

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignition Direct Injection			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignition Direct Injection

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M7)	Manual(M7)	911 Carrera 4 Cabriolet M7					
N	No	Auto(AM-S7)	Auto(AM-S7)	911 Carrera 4S A7					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S7)	Auto(AM-S7)	911 Carrera Cabriolet A7					
N	No	Manual(M7)	Manual(M7)	911 Carrera Cabriolet M7					
N	No	Auto(AM-S7)	Auto(AM-S7)	911 Carrera S A7					
N	No	Manual(M7)	Manual(M7)	911 Carrera S M7					
N	No	Auto(AM-S7)	Auto(AM-S7)	911 Carrera S Cabriolet A7					
N	No	Manual(M7)	Manual(M7)	911 Carrera S Cabriolet M7					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)	N/A					
N	No	Manual(M6)	Manual(M6)	Boxster GTS					
N	No	Auto(AM-S7)	Auto(AM-S7)	Boxster S					
N	No	Manual(M6)	Manual(M6)	Boxster S					
N	No	Auto(AM-S7)	Auto(AM-S7)	N/A					
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)	N/A					
N	No	Manual(M6)	Manual(M6)	Cayman GTS					
N	No	Auto(AM-S7)	Auto(AM-S7)	N/A					
N	No	Manual(M6)	Manual(M6)	Cayman S					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	N/A					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	N/A					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera 4					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera 4S					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera 4S Executive					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera GTS					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera S					
Y	Yes	Auto(AM-S	Auto(AM-S		CD-2C	Charge DeCS-2C		Charge Sustaining 2-cycle	
Y	Yes	Auto(AM-S	Auto(AM-S		CD-2C	Charge DeCS-2C		Charge Sustaining 2-cycle	
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo Executive					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo S					
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	Panamera Turbo Executive					

EPA Calcu	EPA Calculated Gas G	[redacted]	GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
30.5	[redacted]	5	5	FPRXV04.0	5		
28.8		5	5	FPRXV04.0	5		
30.1		5	5	FPRXV04.0	5		
28.9		5	5	FPRXV04.0	5		
29.5		5	5	FPRXV04.0	5		
28.2		5	5	FPRXV04.0C91	5		
28.8		5	5	FPRXV04.0C91	5		
28.0		5	5	FPRXV04.0	5		
28.0		5	5	FPRXV04.	5		
27.6		5	5	FPRXV04.0	5		
30.6		5	5	FPRXV04.0C91	5		
28.9		5	5	FPRXV04.0C91	5		
29.4		5	5	FPRXV04.0C91	5		
28.6		5	5	FPRXV04.0C91	5		
28.9		5	5	FPRXV04.0C91	5		
28.3		5	5	FPRXV04.0C91	5		
21.8		4	4	FPRXV04.0	5		
29.4		5	5	FPRXV04.0	5		
28.2		5	5	FPRXV04.0	5		
27.5		5	5	FPRXV04.0	5		
27.1		5	5	FPRXV04.0	5		
27.0		5	5	FPRXV04.0	5		
27.0		5	5	FPRXV04.0	5		
33.9		6	6	FPRXV02.7	5		
31.4		6	6	FPRXV02.7B81	5		
32.8		6	6	FPRXV03.4B81	5		
29.0		5	5	FPRXV03.4B81	5		
31.8		6	6	FPRXV03.4B81	5		
31.8		5	5	FPRXV03.4B81	5		
33.9		6	6	FPRXV02.7B81	5		
31.4		6	6	FPRXV02.7B81	5		
32.8		6	6	FPRXV03.4B81	5		
29.0		5	5	FPRXV03.4B81	5		
31.8		6	6	FPRXV03.4B81	5		
31.8		5	5	FPRXV03.4B81	5		
		4	4	FPRXT03.6MCS	5		
		4	4	FPRXT03.6MT6	5		
28.4		5	5	FPRXV03.6PV6	5		
27.7		5	5	FPRXV03.6PV6	5		
27.1		5	5	FPRXV03.6PV6	5		
26.7		5	5	FPRXV03.6PV6	5		
24.1		4	4	FPRXV04.8PS8	5		
27.1		5	5	FPRXV03.6PV6	5		
31.4		8	9	FPRXJ03.(	5		
31.4		8	9	FPRXJ03.(	5		
24.0		4	4	FPRXV04.8	5		
23.7		4	4	FPRXV04.8PT8	5		
24.0		4	4	FPRXV04.8PT8	5		
23.7		4	4	FPRXV04.8PT8	5		

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

[illegible]	You Save$	You Spe	City CO2 R	Hwy CO2 F	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		1500	441	315	384			
		2000	473	326	407			
		1500	440	322	387			
		2000	466	329	404			
		2000	449	331	396			
		2000	473	340	413			
		2000	462	338	406			
		2500	482	336	416			
		2500	480	341	417			
		2500	487	344	423			
		1500	433	315	380			
		2000	465	328	404			
		2000	455	328	398			
		2000	469	328	406			
		2000	468	328	405			
		2000	472	335	410			
		5750	606	434	529			
		2000	464	337	407			
		2500	485	341	420			
		2500	483	350	423			
		2500	496	349	430			
		3250	518	363	448			
		3250	518	363	448			
	0		406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
	0		406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
		4000	517	388	459			
		4000	537	382	467			
		2000	487	319	411			
		2500	494	331	421			
		2500	508	333	429			
		3250	517	336	436			
		4000	572	368	480			
		2500	508	333	429			
	1750		74	0	41			
	1750		392	303	352			
		4750	577	368	483			
		4750	583	372	488			
		4750	577	368	483			
		4750	583	372	488			

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
349.3	224.8	293.3	441.3	314.9	384.4			
375.9	233.1	311.6	472.7	326.1	406.7			
348.5	229.9	295.1	440.4	321.8	387.0			
370.1	235.0	309.3	465.9	328.7	404.2			
355.9	237.0	302.4	449.1	331.4	396.1			
376.4	243.1	316.4	473.3	339.6	413.1			
367.1	241.7	310.7	462.3	337.7	406.2			
383.6	240.5	319.2	481.8	336.1	416.2			
382.2	243.8	319.9	480.1	340.5	417.3			
388.2	246.5	324.4	487.2	344.2	422.8			
342.0	225.2	289.4	432.7	315.5	380.0			
369.6	234.6	308.8	465.3	328.1	403.6			
361.0	234.3	304.0	455.1	327.7	397.8			
372.8	234.8	310.7	469.1	328.4	405.8			
372.2	234.2	310.1	468.3	327.6	405.0			
375.4	239.8	314.4	472.1	335.1	410.4			
488.4	313.5	409.7	605.5	434.4	528.5			
368.9	240.9	311.3	464.4	336.6	406.9			
386.4	243.9	322.3	485.1	340.7	420.1			
384.9	251.1	324.7	483.3	350.4	423.5			
396.0	250.4	330.5	496.4	349.4	430.2			
414.1	260.8	345.1	517.8	363.4	448.3			
414.1	260.8	345.1	517.8	363.4	448.3			
319.0	198.1	264.6	405.5	279.0	348.6			
343.5	214.2	285.3	434.5	300.7	374.3			
324.5	205.6	271.0	412.0	289.1	356.7			
363.4	239.0	307.4	458.0	334.1	402.2			
338.0	212.4	281.5	428.0	298.2	369.6			
359.2	231.2	301.6	453.0	323.6	394.8			
319.0	198.1	264.6	405.5	279.0	348.6			
343.5	214.2	285.3	434.5	300.7	374.3			
324.5	205.6	271.0	412.0	289.1	356.7			
363.4	239.0	307.4	458.0	334.1	402.2			
338.0	212.4	281.5	428.0	298.2	369.6			
359.2	231.2	301.6	453.0	323.6	394.8			
413.4	278.8	352.8	517.0	387.7	458.8			
430.1	274.6	360.1	536.7	382.0	467.1			
387.7	227.8	315.7	486.6	319.0	411.2			
393.9	236.6	323.1	494.0	330.8	420.6			
405.8	238.5	330.5	508.0	333.4	429.4			
413.7	240.4	335.7	517.3	336.0	435.7			
460.2	264.2	372.0	572.2	368.0	480.3			
405.8	238.5	330.5	508.0	333.4	429.4			
51.7	0	28.5	73.9	0	40.7	229.0	3.0	540
307.0	216.2	266.4	391.9	303.0	351.9	229.0		540
464.1	264.0	374.1	576.8	367.7	482.7			
469.1	267.4	378.3	582.7	372.3	488.0			
464.1	264.0	374.1	576.8	367.7	482.7			
469.1	267.4	378.3	582.7	372.3	488.0			

				Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
			N	4.3	4.3			
			N	4.5	4.5			
			N	4.3	4.3			
			N	4.5	4.5			
			N	4.5	4.5			
			N	4.5	4.5			
			N	4.5	4.5			
			N	4.8	4.8			
			N	4.8	4.8			
			N	4.8	4.8			
			N	4.3	4.3			
			N	4.5	4.5			
			N	4.5	4.5			
			N	4.5	4.5			
			N	4.5	4.5			
			N	4.5	4.5			
			N	5.9	5.9			
			N	4.5	4.5			
			N	4.8	4.8			
			N	4.8	4.8			
			N	4.8	4.8			
			N	5.0	5.0			
			N	5.0	5.0			
			N	3.8	3.8			
			N	4.2	4.2			
			N	4.0	4.0			
			N	4.5	4.5			
			N	4.2	4.2			
			N	4.3	4.3			
			N	3.8	3.8			
			N	4.2	4.2			
			N	4.0	4.0			
			N	4.5	4.5			
			N	4.2	4.2			
			N	4.3	4.3			
			N	5.3	5.3			
			N	5.3	5.3			
			N	4.5	4.5			
			N	4.8	4.8			
			N	4.8	4.8			
			N	5.0	5.0			
			N	5.3	5.3			
			N	4.8	4.8			
28	36	31	N	0.5	0.5			
			N	4.0	4.0			
			N	5.6	5.6			
			N	5.6	5.6			
			N	5.6	5.6			
			N	5.6	5.6			

| [redacted] | [redacted] | [redacted] |

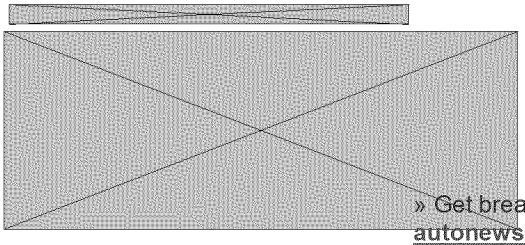
mined)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 7/11/2014 8:45:34 PM
Subject: DAILY: De Nysschen helps fill GM's leadership void at Cadillac | Top Toyota designer heads to Yamaha | Chrysler recalls 895,000 vehicles | Honda, Toyota, Nissan meet with Obama

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July 11, 2014



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TOP NEWS

GM hires de Nysschen to replace Ferguson as Cadillac chief

UPDATED: 7/11/14 12:27 pm ET - updates start date
8:16 am U.S. ET | Jul 11

General Motors is hiring Johan de Nysschen, the former Audi executive who is leaving Nissan's Infiniti, to lead global Cadillac sales, GM said today. ... » READ

Top Toyota designer heads to Yamaha

12:14 pm U.S. ET | Jul 11

Akihiro "Dezi" Nagaya, a key designer who brought more emboldened, emotional styling to Toyota and Lexus vehicles, has been named design general manager for affiliate Yamaha Motor Co. ... » READ

Chrysler recalls 895,000 Grand Cherokees, Durangos for potential

fire hazard

10:19 am U.S. ET | Jul 11

Chrysler Group said today it is recalling 895,000 SUVs for faulty wiring in vanity mirror lights that can short circuit and set fire. ... » READ

Honda, Toyota, Nissan meet with Obama about supplier aid pledge

3:43 pm U.S. ET | Jul 11

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ZF-TRW combination could spark more supplier deals

4:02 pm U.S. ET | Jul 11

German supplier ZF Friedrichshafen's takeover offer for rival TRW Automotive looks unlikely to draw rival bids for the Michigan-based company, but could trigger further deals down the line, bankers and analysts said today. ... » READ

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A super SAAR and signs of a stellar

second half

Tesla cleared to open up to 5 stores in Pa. under new law

3:15 pm U.S. ET | Jul 11

NHTSA investigates 500,000 Ford Motor sedans for potential steering problems

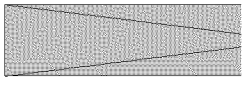
UPDATED: 7/11/14 1:56 pm ET - adds links

1:20 pm U.S. ET | Jul 11

Acura plans second-half sales lift from TLX in U.S.

7:34 am U.S. ET | Jul 11

2 senators want probe of delays in rail deliveries to dealerships



UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

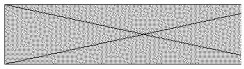
» Nov. 21 - Automobilwoche Kongress



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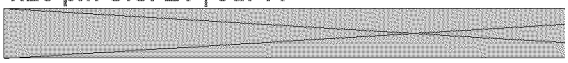
» July 30 - Marketing Market Price

by MAX Digital



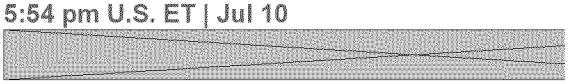
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4:23 pm U.S. ET | Jul 11



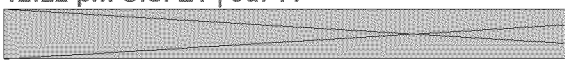
Maserati could benefit from Chrysler minority dealer program, exec says

5:54 pm U.S. ET | Jul 10



Musk pledges $1 million to help build Tesla Science Center

12:22 pm U.S. ET | Jul 11

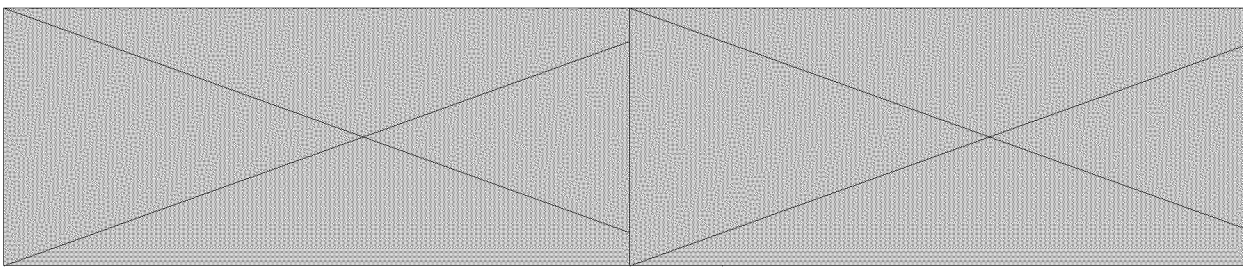


Mercedes' $1 million S-class Pullman upstages Rolls-Royce

12:01 am U.S. ET | Jul 7



» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that put Profits at Risk



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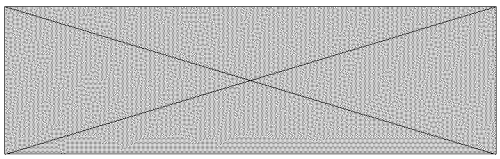
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/14/2014 1:05:07 PM
Subject: A.M. NEWSCAST: VW adding SUV, 2,000 jobs to TN plant; works council chair joins U.S. board | Report: U.S. probing GM 'fraud' | Toyota engine overhaul | Castaway Cube

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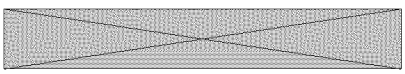
July 14, 2014



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U.S. probes GM 'fraud' »

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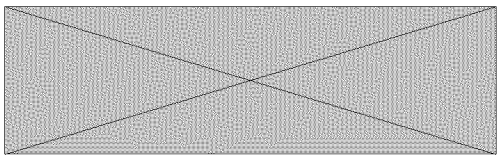
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 7/14/2014 7:56:07 PM
Subject: P.M. NEWSCAST: 'Our customers want this,' VW exec says | Ally, minority dealers aim to boost financial savvy | Jeb Bush to deliver NADA '15 keynote

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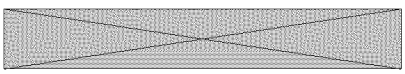
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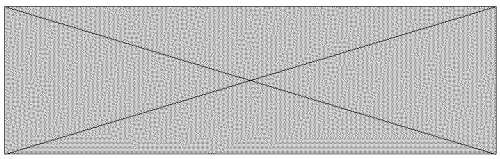
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/14/2014 7:57:07 PM
Subject: P.M. NEWSCAST: 'Our customers want this,' VW exec says | Ally, minority dealers aim to boost financial savvy | Jeb Bush to deliver NADA '15 keynote

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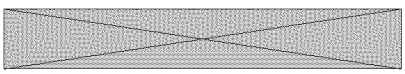
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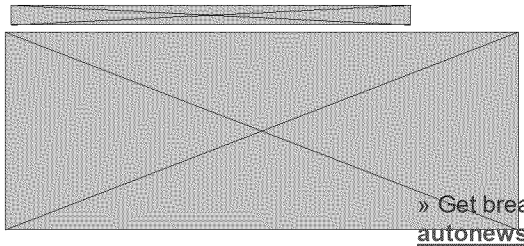
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 7/14/2014 8:48:17 PM
Subject: DAILY: U.S. case against GM to focus on misleading statements, report says | EPA seeks real-world tests of mpg claims | Lexus' makeover begins to pay off | Jay Leno, Jeb Bush to keynote '15 NADA convention

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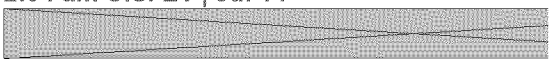
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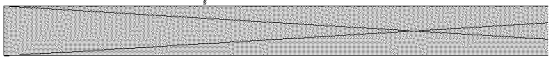
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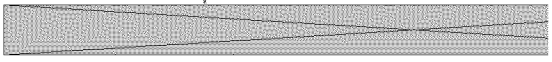
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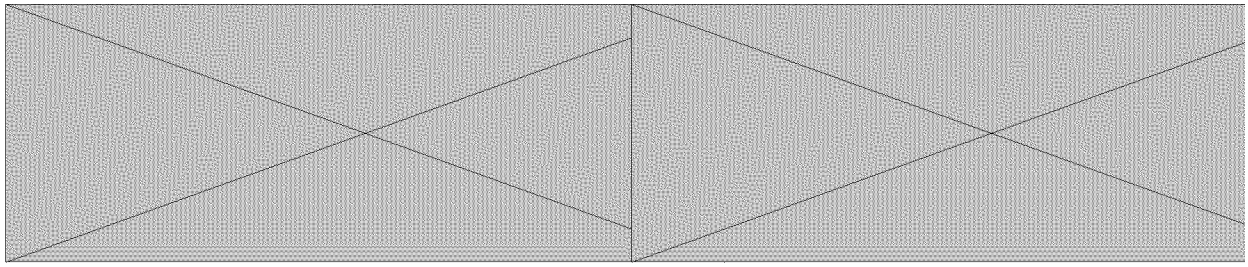
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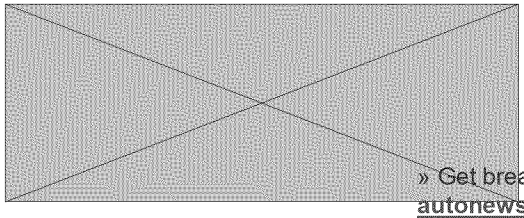
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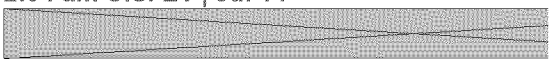
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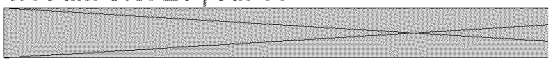
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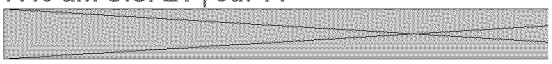
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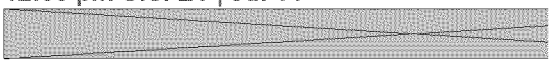
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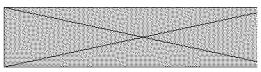
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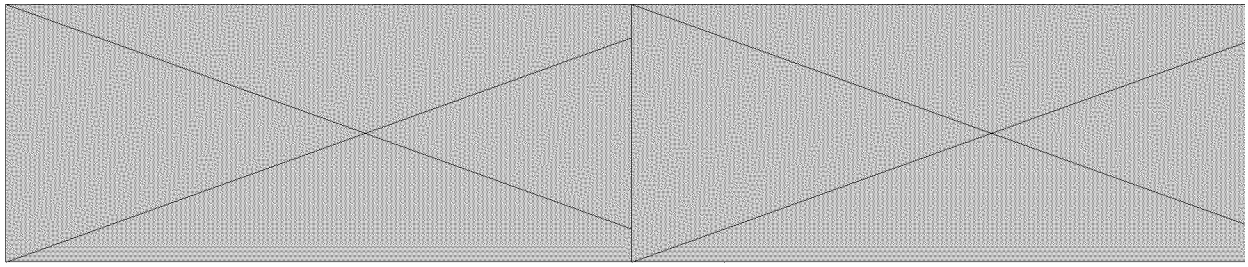
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To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Wick, Anne[Wick.Anne@epa.gov]; Choi, Jake[Choi.Jake@epa.gov]; jason.Barbeau@usdoj.gov[jason.Barbeau@usdoj.gov]
From: Belser, Evan
Sent: Tue 7/15/2014 2:39:22 PM
Subject: FW: EPA Asks Car Makers to Road Test Fuel-Economy Claims

FYI

I'm forwarding a WSJ story about OTAQ's fuel economy program. Ex. 5, 7

Ex. 5, 7

Evan

From: Conger, Nick
Sent: Tuesday, July 15, 2014 9:37 AM
To: Belser, Evan; Senn, John
Subject: FW: EPA Asks Car Makers to Road Test Fuel-Economy Claims

Nick Conger

Communications Director

Office of Enforcement

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

From: Millett, John
Sent: Tuesday, July 15, 2014 9:30 AM
To: Conger, Nick
Subject: FW: EPA Asks Car Makers to Road Test Fuel-Economy Claims

Fyi --

~~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

From: Millett, John
Sent: Tuesday, July 15, 2014 9:24 AM
To: Mylan, Christopher; Jones, Enesta; McMichael, Nate; Le, Madison
Cc: Colaizzi, Jennifer C.
Subject: WSJ: EPA Asks Car Makers to Road Test Fuel-Economy Claims

For the Ford mpg corrections, we said that we were considering requiring an industry-wide audit of the coast down procedure. Not sure what proposal is being referred to . . .

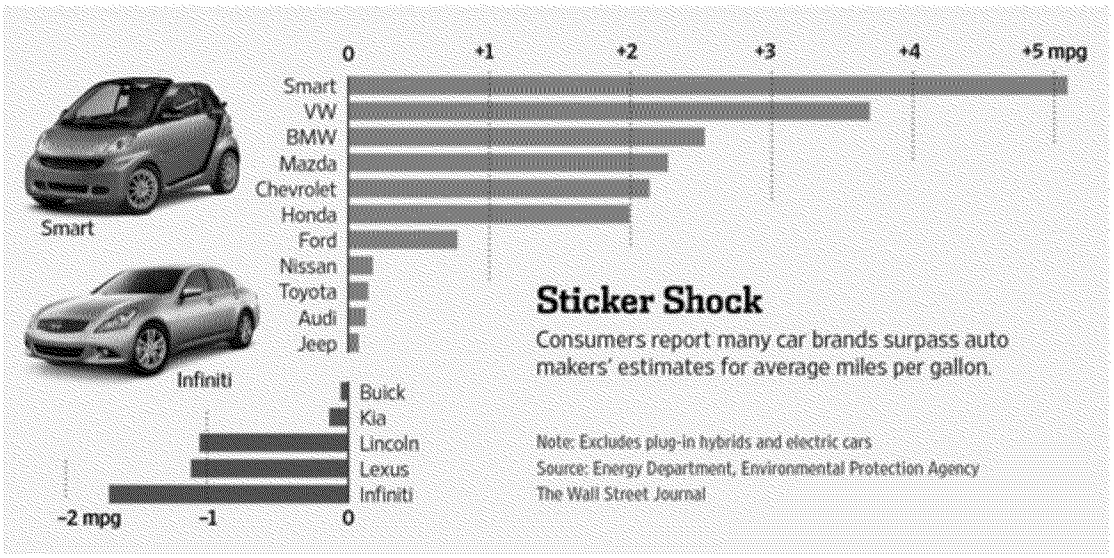
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Inflated Mileage Claims Trigger New Look at How Measurements Conducted

By

Mike Ramsey

July 14, 2014 12:33 p.m. ET



The Environmental Protection Agency wants auto makers to road test the mileage claims they submit after a rash of recent inflated fuel-economy claims based on wind tunnel and other laboratory measurements.

The proposal, which would require a public comment period, comes after several high profile cases in which estimates provided by Ford Motor Co. F +0.46%Ford Motor Co. were inflated and triggered complaints to regulators and auto makers. The EPA has adjusted the test over the years—most recently in 2008—to better match new-car window stickers to actual results

"Some auto makers already do this, but we are establishing a regulatory requirement for all auto makers," said Chris Grundler, director of the EPA's Office of Transportation and Air Quality. The proposal would make it difficult to manipulate lab results to achieve higher mileage ratings.

Generally, window stickers have better conformed with drivers' experience since the test was changed in 2008, Mr. Grundler said. In fact, a Wall Street Journal comparison of auto makers' estimates against driver-provided reports posted on a government website shows many owners should get slightly better mileage than the car makers estimate.



Ford last month said it had overstated the mileage of several cars. *Bloomberg News*

For instance, drivers of the 2011 Ford Fiesta subcompact reported an average of 37 miles on a gallon of gasoline, compared with the 33 mpg window sticker. A total of 17 different drivers entered results for that car.

The analysis of nearly 1,000 vehicle models from 2012 through 2015 model years found that fuel economy reported by drivers to the government's fueleconomy.gov website was 1.2 mpg better than the EPA label. The analysis excludes electric and plug-in electric vehicles like the Chevrolet Volt

Some experts say the fueleconomy.gov estimates may be higher than the general population because of driver pride. Rick Goeltz, a researcher in the Center for Transportation Analysis at Oak Ridge National Laboratory, which maintains the data, said consumers most likely to take time to record their mileage, are more likely to be focused on getting good mileage and therefore drive more economically.

All car makers run fuel economy tests in real-world driving, but the type of real-world test the EPA is looking for is different. They want companies to measure air-resistance and rolling friction on a test track and not just a computer model. These data can dramatically affect fuel economy, particularly in very efficient vehicles like hybrids, which is what happened to Ford on its incorrect labeling.

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"We've continued to work constructively with the EPA to regularly audit real-world performance and cooperatively establish testing protocols that reflect how people drive today," said The Alliance of Automobile Manufacturers, the lobbying group that represents most auto makers in the U.S.

In 2012, the EPA forced the South Korean companies to lower EPA label figures on much of their lineups. This came after customer complaints about the variance. The companies agreed to pay drivers for the difference based on how many miles they drove. Later, following a class-action lawsuit, owners received one-time cash payouts.

Ford last month said it overstated the mileage of six 2013 and 2014 models, mostly gasoline-electric hybrids. Ford said it would pay owners of the cars up to $1,050 to compensate them for the failure to deliver advertised fuel savings. Ford made the change after a real-world driving audit found mistakes in the testing it had used.

Ford's problems were with very efficient cars, mostly hybrids, and that is where variances from the real world and test results often appear. Small changes to the formula used to test the car can have a big impact, Mr. Grundler said.

It isn't well known, but the EPA doesn't test every new car. Most lab testing for fuel economy is performed by auto makers and the data is vetted by the agency.

The EPA currently requires a five-part lab test that simulates driving under conditions that are repeatable from one car to another. Because of the number of vehicles on the road, the agency runs tests on only about 15% of the industry's models each year to check the accuracy of mileage claims.

In real world use, hybrids for many auto makers tended to underperform the lab results. Meanwhile, diesel engines tend to perform much better than the label—by almost 5 miles a gallon, according to The Journal's analysis. The spread is so significant that Mr. Grundler has asked engineers to look into why the testing of diesels doesn't reflect real-world results more closely.

Corrections & Amplifications

Ford last month disclosed it had overstated the mileage of several cars. An earlier version of this article incorrectly said it was earlier this month.

Write to Mike Ramsey at michael.ramsey@wsj.com

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John Millett
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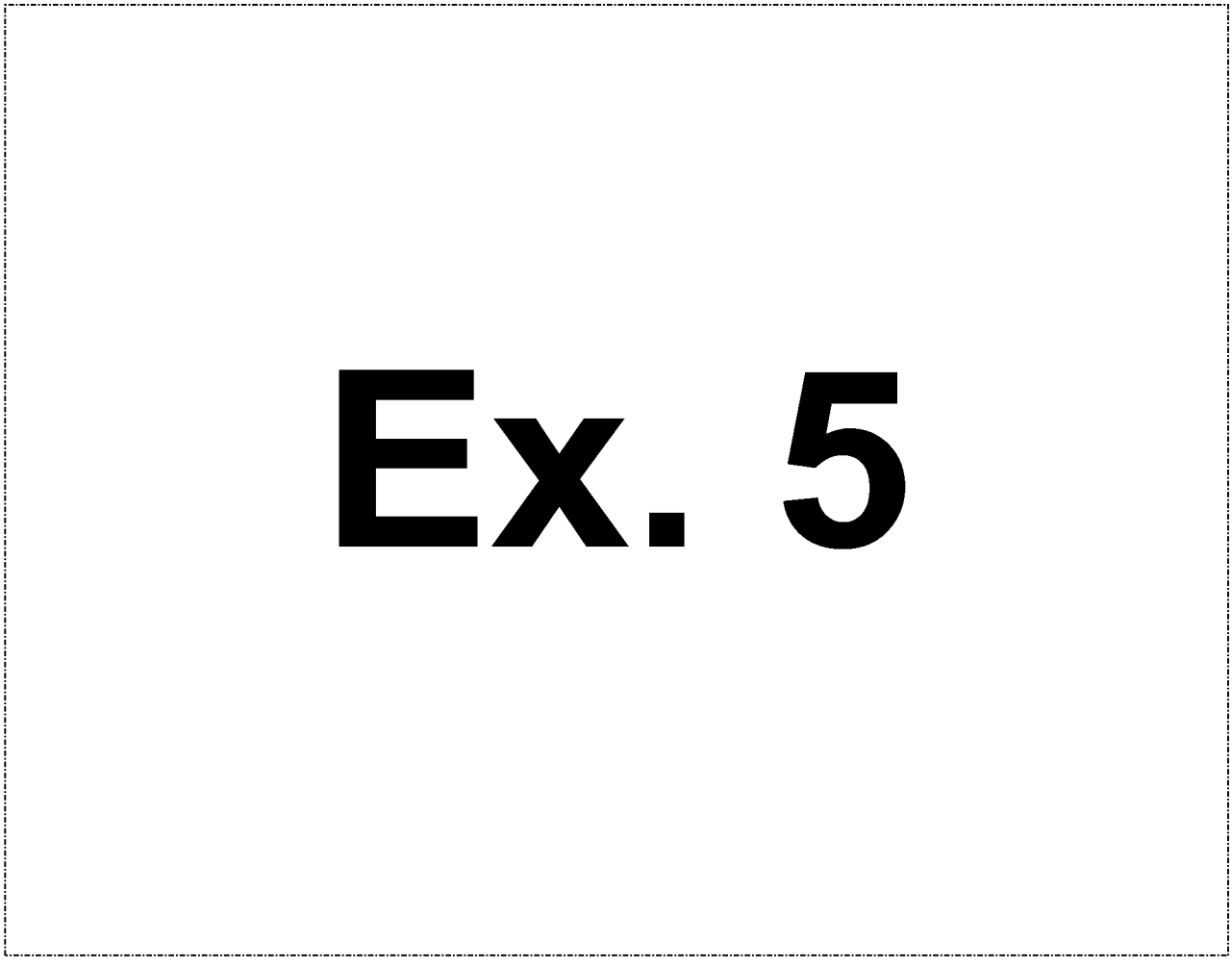
Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

-----Original Message-----
From: Mylan, Christopher
Sent: Tuesday, July 15, 2014 9:11 AM
To: Jones, Enesta; McMichael, Nate; Le, Madison
Cc: Millett, John; Colaizzi, Jennifer C.
Subject: RE: ACTION: Automotive World in UK asking for comment RE: road test

Enesta,



Christopher Mylan

U.S. EPA

Office of Transportation and Air Quality

Phone: 202-564-7411

-----Original Message-----

From: Jones, Enesta

Sent: Tuesday, July 15, 2014 8:53 AM

To: McMichael, Nate; Mylan, Christopher; Le, Madison

Cc: Millett, John; Colaizzi, Jennifer C.

Subject: Re: ACTION: Automotive World in UK asking for comment RE: road test

I now have CNN in my in-box. Can someone fill me in on this?

Enesta Jones

U.S. EPA, Office of Media Relations

Desk: 202.564.7873

Cell: 202.236.2426

From: Jones, Enesta

Sent: Tuesday, July 15, 2014 7:41:31 AM

To: McMichael, Nate; Mylan, Christopher; Le, Madison

Cc: Jones, Enesta; Millett, John; Colaizzi, Jennifer C.

Subject: ACTION: Automotive World in UK asking for comment RE: road test

Do we have a statement that we issued yesterday?

Enesta Jones

U.S. EPA, Office of Media Relations

Desk: 202.564.7873

Cell: 202.236.2426

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Wick, Anne[Wick.Anne@epa.gov]; Choi, Jake[Choi.Jake@epa.gov]; Barbeau, Jason (ENRD)[Jason.Barbeau@usdoj.gov]
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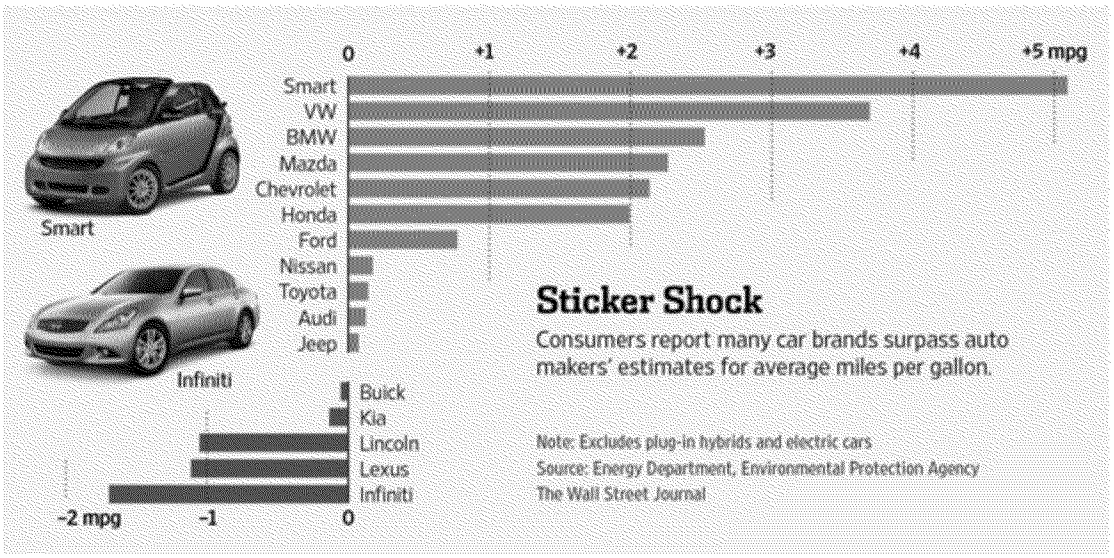
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By

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Generally, window stickers have better conformed with drivers' experience since the test was changed in 2008, Mr. Grundler said. In fact, a Wall Street Journal comparison of auto makers' estimates against driver-provided reports posted on a government website shows many owners should get slightly better mileage than the car makers estimate.



Ford last month said it had overstated the mileage of several cars. *Bloomberg News*

For instance, drivers of the 2011 Ford Fiesta subcompact reported an average of 37 miles on a gallon of gasoline, compared with the 33 mpg window sticker. A total of 17 different drivers entered results for that car.

The analysis of nearly 1,000 vehicle models from 2012 through 2015 model years found that fuel economy reported by drivers to the government's fueleconomy.gov website was 1.2 mpg better than the EPA label. The analysis excludes electric and plug-in electric vehicles like the Chevrolet Volt

Some experts say the fueleconomy.gov estimates may be higher than the general population because of driver pride. Rick Goeltz, a researcher in the Center for Transportation Analysis at Oak Ridge National Laboratory, which maintains the data, said consumers most likely to take time to record their mileage, are more likely to be focused on getting good mileage and therefore drive more economically.

All car makers run fuel economy tests in real-world driving, but the type of real-world test the EPA is looking for is different. They want companies to measure air-resistance and rolling friction on a test track and not just a computer model. These data can dramatically affect fuel economy, particularly in very efficient vehicles like hybrids, which is what happened to Ford on its incorrect labeling.

Related

- VW Picks U.S. Factory to Build SUVs

"We've continued to work constructively with the EPA to regularly audit real-world performance and cooperatively establish testing protocols that reflect how people drive today," said The Alliance of Automobile Manufacturers, the lobbying group that represents most auto makers in the U.S.

In 2012, the EPA forced the South Korean companies to lower EPA label figures on much of their lineups. This came after customer complaints about the variance. The companies agreed to pay drivers for the difference based on how many miles they drove. Later, following a class-action lawsuit, owners received one-time cash payouts.

Ford last month said it overstated the mileage of six 2013 and 2014 models, mostly gasoline-electric hybrids. Ford said it would pay owners of the cars up to $1,050 to compensate them for the failure to deliver advertised fuel savings. Ford made the change after a real-world driving audit found mistakes in the testing it had used.

Ford's problems were with very efficient cars, mostly hybrids, and that is where variances from the real world and test results often appear. Small changes to the formula used to test the car can have a big impact, Mr. Grundler said.

It isn't well known, but the EPA doesn't test every new car. Most lab testing for fuel economy is performed by auto makers and the data is vetted by the agency.

The EPA currently requires a five-part lab test that simulates driving under conditions that are repeatable from one car to another. Because of the number of vehicles on the road, the agency runs tests on only about 15% of the industry's models each year to check the accuracy of mileage claims.

In real world use, hybrids for many auto makers tended to underperform the lab results. Meanwhile, diesel engines tend to perform much better than the label—by almost 5 miles a gallon, according to The Journal's analysis. The spread is so significant that Mr. Grundler has asked engineers to look into why the testing of diesels doesn't reflect real-world results more closely.

Corrections & Amplifications

Ford last month disclosed it had overstated the mileage of several cars. An earlier version of this article incorrectly said it was earlier this month.

Write to Mike Ramsey at michael.ramsey@wsj.com

~~~~~~~~~~~~~~~~~

John Millett
~~~~~~~~~~~~~~~~~

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

-----Original Message-----
From: Mylan, Christopher
Sent: Tuesday, July 15, 2014 9:11 AM
To: Jones, Enesta; McMichael, Nate; Le, Madison
Cc: Millett, John; Colaizzi, Jennifer C.
Subject: RE: ACTION: Automotive World in UK asking for comment RE: road test

Enesta,

Ex. 5

Christopher Mylan

U.S. EPA

Office of Transportation and Air Quality

Phone: 202-564-7411

-----Original Message-----

From: Jones, Enesta

Sent: Tuesday, July 15, 2014 8:53 AM

To: McMichael, Nate; Mylan, Christopher; Le, Madison

Cc: Millett, John; Colaizzi, Jennifer C.

Subject: Re: ACTION: Automotive World in UK asking for comment RE: road test

I now have CNN in my in-box. Can someone fill me in on this?

Enesta Jones

U.S. EPA, Office of Media Relations

Desk: 202.564.7873

Cell: 202.236.2426

From: Jones, Enesta

Sent: Tuesday, July 15, 2014 7:41:31 AM

To: McMichael, Nate; Mylan, Christopher; Le, Madison

Cc: Jones, Enesta; Millett, John; Colaizzi, Jennifer C.

Subject: ACTION: Automotive World in UK asking for comment RE: road test

Do we have a statement that we issued yesterday?

Enesta Jones

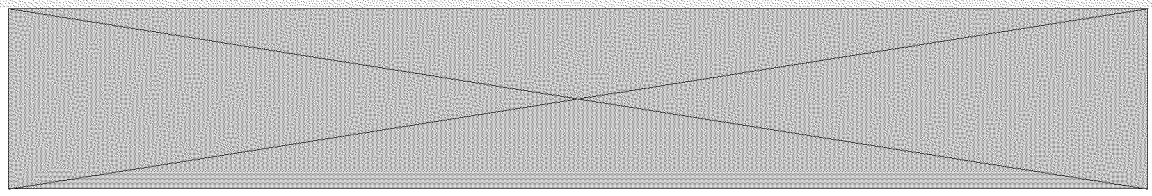
U.S. EPA, Office of Media Relations

Desk: 202.564.7873

Cell: 202.236.2426

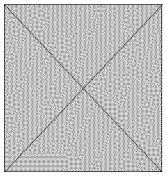
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 7/15/2014 4:30:02 PM
Subject: Green Car Report Daily Headlines

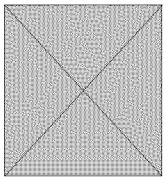
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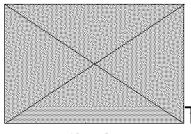
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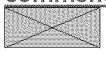
Hyundai Vs. Tesla, Gas-Mileage Road Testing, BMW Shares Battery Tech: Today's Car News

Jul 15, 2014 03:32 pm | feedback@highgearmedia.com (Stephen Edelstein)

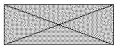


Today on Green Car Reports: An executive's statement sparks conflict between Hyundai and Tesla, the EPA wants carmakers to verify gas mileage with road testing, and BMW and Samsung plan to share battery tech with other companies. All this and more on Green Car Reports. Apparently sick of "range anxiety," a Chinese Tesla Model S owner buys a series...

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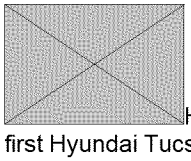






Hyundai: Gasoline Suppliers 'Should Invest In Hydrogen Infrastructure'

Jul 15, 2014 02:59 pm | feedback@highgearmedia.com (Matthew Askari)



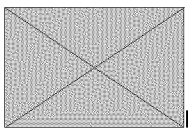
Hyundai recently handed off the keys to its first Hyundai Tucson Fuel Cell customer, and the Korean carmaker has consistently said it believes hydrogen vehicles--and fuel-cell technology--will be the equivalent of "the next electric car." Plug-in electric vehicles are steadily

gaining a foothold, thanks to models like the Nissan Leaf and Tesla...

comments | read more

Hyundai Vs. Tesla: Exec Claims U.S. Funds Superchargers, Electric-Car Maker Angrily Rebuts

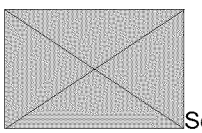
Jul 15, 2014 03:01 pm | feedback@highgearmedia.com (John Voelcker)

 Every so often, an auto executive will say something that raises an eyebrow or two. In this case, a Hyundai executive suggested that while his company had received no money for its hydrogen vehicles from the U.S. government, the Tesla Motors network of Supercharger DC fast-charging stations for electric cars was paid for using "money that has come...

comments | read more

EPA Wants Carmakers To Verify Gas Mileage With Road Testing Too

Jul 15, 2014 01:16 pm | feedback@highgearmedia.com (Antony Ingram)

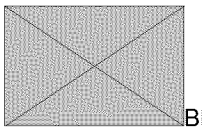
 Several automakers have come under fire in recent years over reported EPA gas mileage figures that prove unattainable in the real world. According to the Wall Street Journal, the EPA plans to require car manufacturers to road-test new cars to confirm gas-mileage ratings based on laboratory tests that they submit to the EPA. The EPA is...

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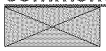
BMW, Samsung To Share Electric-Car Battery Tech With Other Makers

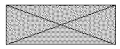
Jul 15, 2014 12:20 pm | feedback@highgearmedia.com

(Antony Ingram)

 BMW has announced that it's open to sharing the battery technology it uses in its i3 and i8 plug-in vehicles with other automakers. The company hopes that by sharing the technology, which it co-developed with Samsung SDI, it will benefit from improved economies of scale. According to Automotive News Europe, BMW purchasing boss Klaus Draeger says...

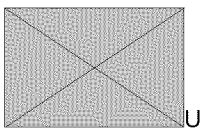
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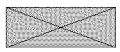
Audi TDI Diesel Engines: Honoring 25 Years Of Fuel Efficiency, Lower Emissions

Jul 15, 2014 11:30 am | feedback@highgearmedia.com
(Antony Ingram)

 U.S. customers haven't had quite the range of diesel vehicles their European counterparts enjoy, but it's still hard to believe that one of the biggest badges in diesel technology--TDI--is now a quarter-century old. Audi launched its first TDI diesel model at the 1989 Frankfurt Auto Show. That car was the Audi 100 TDI, a 2.5-liter, five-cylinder...

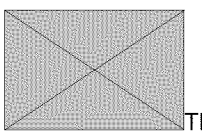
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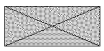
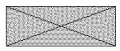


Chinese Tesla Owner Buys 20 Charging Stations, Seeks Sites On Social Media

Jul 15, 2014 11:00 am | feedback@highgearmedia.com
(Stephen Edelstein)

 The question of how to build a comprehensive network of public electric-car charging stations has often puzzled government officials and carmakers alike. For plug-in car adoption to grow, most observers feel there must be plenty of public charging available to boost confidence--whether or not it actually gets used. Now, one Chinese owner Tesla...

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To: Olechiw, Michael[olechiw.michael@epa.gov]; Fernandez, Antonio[fernandez.antonio@epa.gov]; Stout, Alan[stout.alan@epa.gov]; Passavant, Glenn[passavant.glenn@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Wysor, Tad[wysor.tad@epa.gov]
Cc:

Ex. 7

Ex. 7

From:
Sent: Tue 7/15/2014 7:16:08 PM
Subject: USEPA/VW Group Meeting - Tier 3 Implementation
0_Agenda_Clean.pdf
1_Tier 3_update.pdf
2_Compliance-Roadmap.pdf
3_Early_Credit_EarlyTier3.pdf
4_Credit-Calculation-Tier 3.pdf
5_Tier 3_calc_template.pdf
6_Sales-basis.pdf
7_Tier3-Compliance-reports.pdf
8_Carry-over-Examples.pdf
9_DDV-procedure.pdf
10_Evap_Compliance_Calc.pdf

To all:

Attached are the final slides for the July 16, 2014 meeting regarding Tier 3 Implementation. As stated in a previous version, the presentations are numbered in accordance with the topics listed in the agenda.

Best regards,

Ex. 7

Ex. 7

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Ex. 7

From: Ex. 7 (EEO)
Location: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: VW Diesel DEF Refueling Strategy
Start Date/Time: Wed 7/16/2014 5:00:00 PM
End Date/Time: Wed 7/16/2014 6:00:00 PM

;
Hello Jim:
As we discussed on the phone, I understand that EPA is preparing to sign-off on the rulemaking that addresses the more frequent intervals for DEF replacement. We still have one question that we can discuss (it may take a short time). We wish to discuss the feasibility of some relief from the 0.180 g/mi SFTP NMOG+NOx cap for a concept that is going out of production.
Best regards,
Ex. 7

Ex. 7
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Ex. 7

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Tue 7/15/2014 8:54:34 PM
Subject: Notification of a new in-use class T132
NOTIF-T-132-Audi.doc
parameters form cold CO and US06 CO.xlsx

Hi, Tobias.

This is a notification of an upcoming in-use class. Normally, I send an email like this out when a notification letter is sent to a manufacturer to announce an in-use class. However, due to a support staff mix-up, the letter wasn't sent last month when I drafted it. It is being edited and will be sent tomorrow.

Unfortunately, the procurement process has proceeded independently of the letter and we have one of the vehicles scheduled to be procured next week.

I apologize for the late notice of both the in-use class and the notification of the procurement of this vehicle. I am attaching to this email a draft version of the notification letter. A final version will be mailed to Dennis and emailed to you. Because it has been so long, would you please confirm the mailing address?

The vehicle being brought in next week is:

Ex. 7, 07/23/14 (Wednesday) 0730 Vehicle Pick up_

Please fill out the attached parameter sheet and return it to me.

Our contractor, Jacobs, will be contacting you to schedule the maintenance. We have some flexibility in scheduleing the maintenance of the vehicle. I hope that we can find something to accommodate your schedule. If not, please call me and I'll see what I can do.

Again, I apologize for the confusion. Please call me if you have any questions.

Thank you,

Lynn Sohacki

Compliance Division

Environmental Protection Agency

734-214-4851

734-214-4869 fax

July 15, 2014

Mr. Dennis Reineke
Volkswagen of America
3800 Hamlin Rd.,
Auburn Hills, Michigan 48326

Dear Mr. Reineke,

The Environmental Protection Agency will test a 2012 model-year Audi test-group in our surveillance test-program. The group shown in Enclosure 1 will be tested at the National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan. Test results which exceed applicable standards may lead to confirmatory testing.

A sample of three or more vehicles will be procured. Maintenance will consist of an under-hood inspection and review of on-board computer codes. The federal test procedure, highway cycle, and US06 test will follow a single LA-4 preconditioning cycle. If this test-group contains models which are two wheel drive with selectable four wheel drive or selectable all wheel drive, the vehicles may be tested in either of these modes.

Vehicles in the class may be subjected to an evaporative test and/or Cold CO testing. Additionally, fault conditions may be introduced on one or more of the vehicles to test the response of the On-Board Diagnostics (OBD) system. If you are aware of OBD enabling criteria which would limit our ability to evaluate these systems, please inform me. Copies of the OBD enabling criteria which were approved during certification should be provided if there are such limitations.

We invite your representatives to be present as observers during the test program. If you have any questions concerning this investigation please contact me.

Sincerely,

Lynn Sohacki
Compliance Division

Enclosure

ENCLOSURE 1

Lab	NVFEL Ann Arbor, Michigan
Test Group	Ex. 7
Estimated Start Date	Week-ending July 25, 2014
Recall/Testing Representative	Lynn Sohacki
Telephone Number	(734) 214-4851
E-mail address	Sohacki.lynn@epa.gov
Class Numbers	Ex. 7

To: Sohacki, Lynn[sohacki.lynn@epa.gov]
From: Glas, Tobias
Sent: Tue 7/15/2014 8:56:05 PM
Subject: Automatic reply: Notification of a new in-use class **Ex. 7**

I'm on a business trip to Germany. Expect delayed email response.

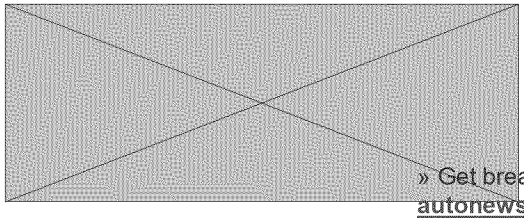
Tobias Glas

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 7/15/2014 9:02:39 PM
Subject: DAILY: VW targets $6.8 billion in annual cuts | Obama touts 'talking' cars | Mulally joins Google board | Owners of 8 N.J. dealerships settle claims of deceptive practices for $1.8 million | How Warren Buffett landed a new Caddy

Today's most read story

Toyota's massive engine overhaul

July 15, 2014



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TOP NEWS

VW targets $6.8 billion in annual cuts to close profit gap with rivals

11:18 am U.S. ET | Jul 15

Volkswagen AG plans to cut costs and boost productivity at the VW brand by $6.8 billion a year by 2017 to lift sagging profitability. Efficiency gains have failed to keep pace with rising labor costs, CEO Martin Winterkorn said in an internal presentation to company managers. ... » READ

Obama touts progress on 'talking' cars

UPDATED: 7/15/14 2:56 pm ET -- Correction

11:20 am U.S. ET | Jul 15

President Barack Obama highlighted government-backed research on technology being developed by companies including Ford and Toyota to allow cars to communicate with each other. ... » READ

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"Millennials and Cars: Why just adapt when you can disrupt the cycle?"

This generation changed the car buying process. Google defined it. You can revolutionize it. Learn how to get ahead of the ZMOT by reaching more new buyers and increasing retention among current customers before they even think to look anywhere else.

Download the whitepaper.

Mulally joins Google board

4:16 pm U.S. ET | Jul 15

Former Ford CEO Alan Mulally has joined the board of directors of Google as the technology giant ramps up development of autonomous light vehicles. ... » READ

Owners of 8 N.J. dealerships settle claims of deceptive practices for $1.8 million

3:14 pm U.S. ET | Jul 15

Eight dealerships in New Jersey owned by Carmelo and Ignazio Giuffre have reached a $1.8 million settlement with the state's Division of Consumer Affairs. ... » READ

How Warren Buffett landed a new Cadillac (and not a Subaru)

3:43 pm U.S. ET | Jul 15

Warren Buffett, who has made himself and others enormously wealthy by investing in some of America's biggest brands, from Coca-Cola to Wells Fargo to Goldman Sachs, is not about to go with Japanese wheels, no matter how practical. ... » READ

Mercedes' 911 fighter

12:01 am U.S. ET | Jul 14

Most of the form-altering camouflage is removed in this spy shot of the Mercedes-Benz AMG GT that will debut in September. ... » READ

ON THE BLOGS

MARK VAUGHN

Acura claims a sales honor with MDX

» READ

MOST READ (Last 7 days)

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Toyota's massive engine overhaul

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Driver of stolen Tesla that crashed, split in 2, dies

Viral video rankings for week of 7/15/2014

BMW, Hyundai flaunt exotic race tracks, fearless stunts

12:01 am U.S. ET | Jul 15

Two new viral videos, two very different locales. ... » Watch the videos

Escalade may add sporty model, engines

12:01 am U.S. ET | Jul 14

Slow growth masks big

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

» Nov. 13-14 - Automobilwoche Kongress

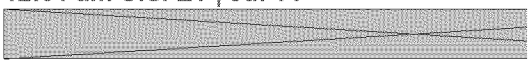
» January 13-14 - Automotive News World Congress

UPCOMING WEBINARS

» July 30 - Marketing Market Price by MAX Digital

swings in ad budgets

12:01 am U.S. ET | Jul 14



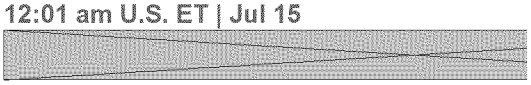
BMW open to sharing battery technology with rivals

3:52 am U.S. ET | Jul 15



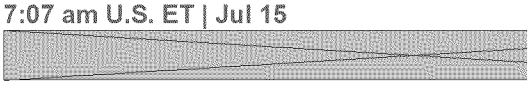
Car-sharing rivals Uber, Lyft tussle over driver recruits

12:01 am U.S. ET | Jul 15



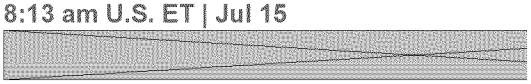
South African metalworkers employers withdraw wage offer

7:07 am U.S. ET | Jul 15



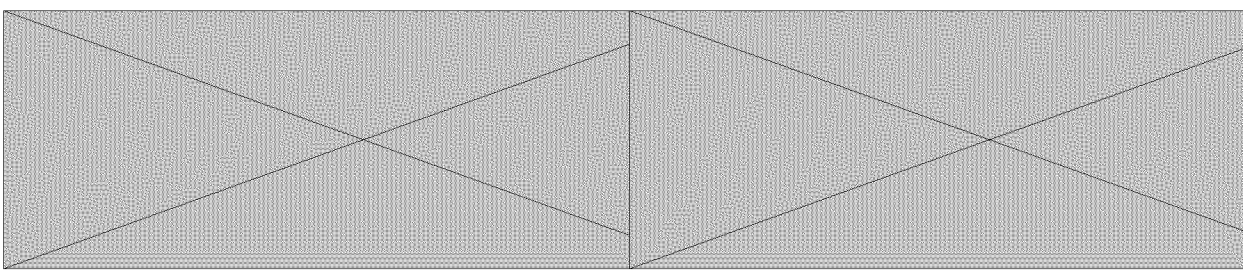
Steel supplier Industrias missing out on Mexico's car boom

8:13 am U.S. ET | Jul 15



UPCOMING WEBINARS

» July 16 - Plugging the Leaks in F&I: How to Deal with Inefficiencies that put Profits at Risk



. .

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Ball, Joel[ball.joel@epa.gov]; Ex. 7 (EEO); Ex. 7 @vw.com]; Ex. 7 @AUDI.DE]; Ex. 7 Ex. 7 @audi.de]; Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Tue 7/15/2014 9:54:39 PM
Subject: RE: VW Diesel DEF Refueling Strategy
201407_A6A7_MY17-18.pdf

Attached is a slide for discussion at 1:00 tomorrow.

Ex. 7

-----Original Appointment-----
From: Ex. 7 (EEO)
Sent: Tuesday, July 15, 2014 4:27 PM
To: Snyder, Jim
Cc: Wehrly, Linc; Wright, DavidA (Wright.DavidA@epa.gov); Dalton, Joel (Dalton.Joel@epa.gov); Ball, Joel (ball.joel@epa.gov); Ex. 7 @AUDI.DE); Ex. 7 Ex. 7 Ex. 7 (EEO)
Subject: Accepted: VW Diesel DEF Refueling Strategy
When: Wednesday, July 16, 2014 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE

Hello Jim:

As we discussed on the phone, I understand that EPA is preparing to sign-off on the rulemaking that addresses the more frequent intervals for DEF replacement. We still have one question that we can discuss (it may take a short time). Ex. 4 - CBI Ex. 4 - CBI

Best regards,

Ex. 7

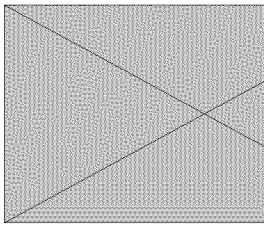
Ex. 7
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.
Ex. 7

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 7/16/2014 8:00:30 AM
Subject: Porsche Sure to Score With Macan

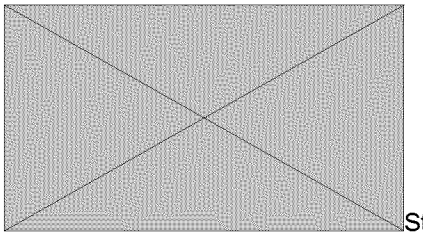
View Web Version | Add to Safe Sender List

WardsAuto OEM Edition

July 16, 2014



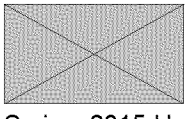
ArcelorMittal Touts New Ultra-Strong Structural Parts for Vehicles



Steelmaker predicts North American automotive customers alone will adopt more than 4 million, hot-stamped, laser-welded blanks during the next two years.

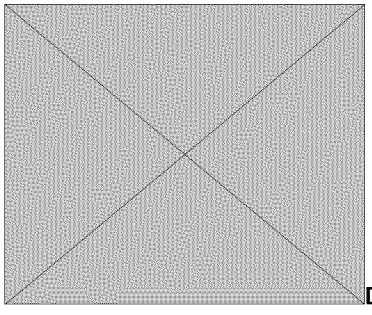
FULL ARTICLE

Autoline Daily



Toyota's Blow-Out Profits; Jaguar XE Targets BMW 3-Series; 2015 Hyundai Sonata

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Design Tips-12 Essentials for Moldability
Ten years ago, we began publishing Protomold Design Tips to help product

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- Read the Current Issue

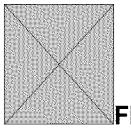
WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

developers create better injection-molded plastic parts. We've covered materials, texture, draft, sink and many other design considerations. More than 100 tips later, we remain steadfast in our effort to continue informing designers and engineers in all areas of injection-molded part design. As a resource, we've gathered some of our most useful manufacturing advice from the past decade in a collection of essential tip s.

Barra Driving Change at GM



FINAL INSPECTION BLOG

Under CEO Mary Barra, GM is the only one stepping up to change the conversation and fix the long-broken mechanisms for protecting consumers from potentially dangerous vehicle defects and compensating victims.

FULL ARTICLE

Advertisement

Improve passenger compartment and seat design with the improved SAE International H-Point Machine The HMP-II defines and locates the standard seating reference point and offers additional leg, shoe, and pedal reference points; lumbar support measurement; easier installation over the SAE HPM-I. Ideal for advanced design/research applications. See video here.

Ford: European Recovery Plan on Track

The automaker reports first-half sales rose 6.6% in Europe to reach 605,400 vehicles, marking the company's best performance for the period since 2011. The result slightly outperformed the market, up 6.3%, keeping Ford's share at a level 7.9%.

FULL ARTICLE

Advertisement

The race to 54.5 mpg by 2025 is on.

ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

Vintage Car Owners Line Up for Fuel

Some 300 classic-car collectors flocked to the Mobil station in Birmingham, MI – and caused quite a traffic jam – to take advantage of the sweetest deal any of them had seen in many, many years.

Advertisement

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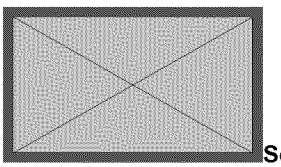
Digital Magazine

FULL ARTICLE

Gallery: Collector Car Appreciation Day

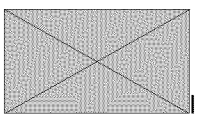
In honor of National Collector Car Appreciation Day, Hagerty Classic Cars, which insures about 900,000 lovingly restored autos nationwide, celebrated by offering owners (many of them customers) up to 10 gallons (37.8 L) of fuel at a deep, deep discount.

Advertisement



Solving Magnesium Corrosion issues in Automotive through the use of Plasma Deposition Processes
Join our Henkel experts as they present Henkel's Bonderite® MCG Process for magnesium substrates to improve paint adhesion and provide corrosion protection—even at the level required for Class A surfaces. They will demonstrate how this aqueous plasma deposition process provides improved robustness in unpainted and painted surfaces.

Test Drive: Porsche Sure to Score With Macan

 If the Cayenne proved to be an easy layup for German engineers who knew nothing about SUVs, then the Macan is Air Jordan soaring through the lane, tongue wagging, ball raised like a lethal tomahawk about to find its target.

FULL ARTICLE

Gallery: '15 Porsche Macan

Derived from the capable Audi Q5, the Macan proves Porsche's absorption into the VW Group in 2012 hasn't been all bad. Yes, it unflinchingly carries over the Q5's general shape, but there the similarities end.

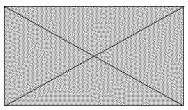
WardsAuto Poll

The new Dodge Challenger SRT Hellcat muscle car breaks the 700-HP barrier at 707. With CAFE targets toughening, where will horsepower top out for non-exotics in 2020? Vote in our latest poll.

VideoWire

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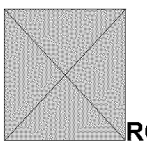

Local, UAW Reaction to VW to Output Plan; Ford Creates Mulally Scholarship

Hyundai Weighing Consumer Response to '15 Sonata

"The feedback we get is that the car looks conservative when you see it in pictures but looks better in person," says Mike O'Brien, vice president-corporate and product planning.

FULL ARTICLE

GM's Do-Over of Chevy Malibu Gets It Right


ROAD AHEAD BLOG
The eAssist hybrid system is gone, replaced by a silky smooth, remarkably quiet stop/start system.

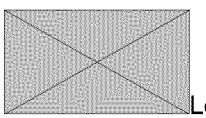
FULL ARTICLE

CrossBlue Headed to Tennessee as VW Makes Bigger U.S. Commitment

Plans call for an investment of $600 million in the Chattanooga plant to add production of the midsize CUV beginning late 2016. The outlay will bring 2,000 new production jobs to the plant.

FULL ARTICLE

Test Drive: New Lexus NX Short on Sport


Lexus' first small CUV is stylish inside and out but lacks the athletic sounds and feel of its main competitors.

FULL ARTICLE

Gallery: '15 Lexus NX

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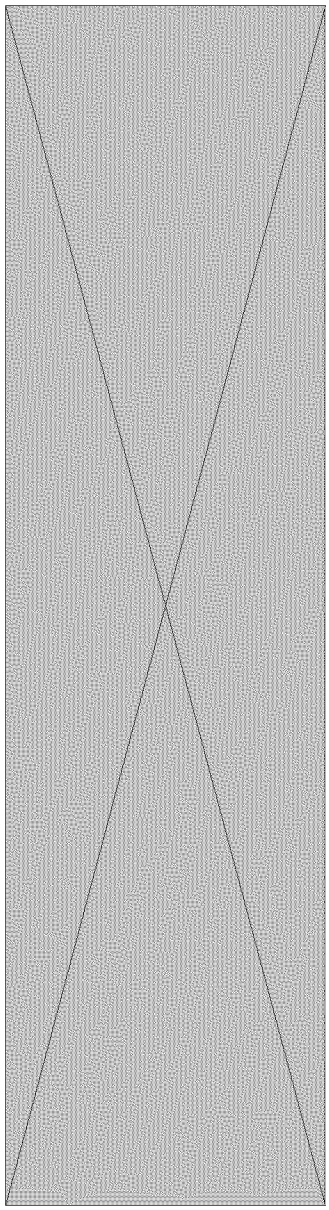
Lexus' new entry-level CUV the NX has style inside and out, including optional red-leather seating and zig-zagging lights and sheetmetal, plus an

ergonomic interior.

GM Woos Infiniti Chief de Nysschen to Cadillac

Johan de Nysschen's appointment at Cadillac comes at a critical time for the 112-year-old GM luxury unit, where U.S. sales are flagging and plans call for 10 new vehicles for the brand by the end of 2015.

FULL ARTICLE

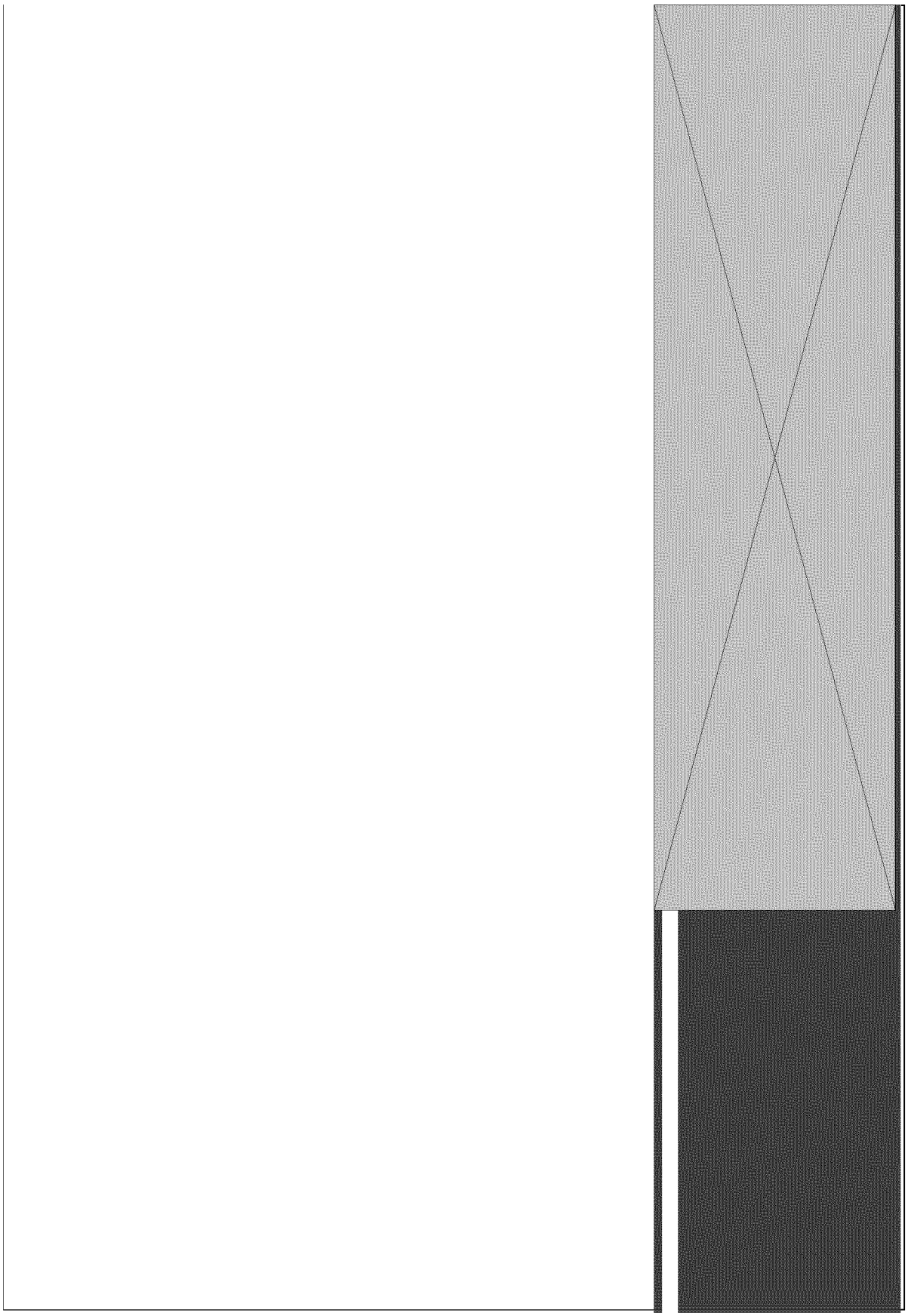


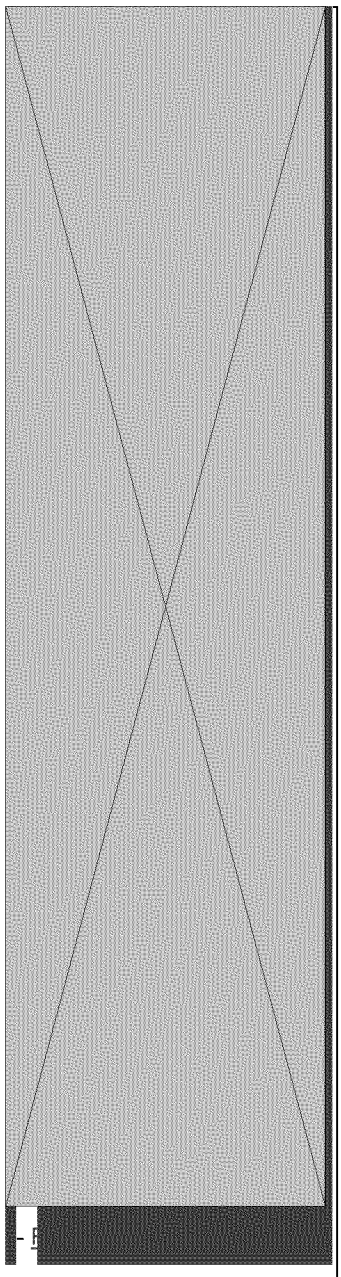
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WHITEPAPER

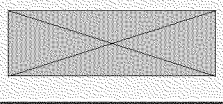
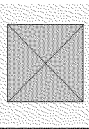
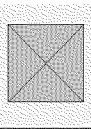
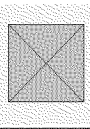
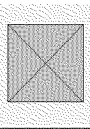
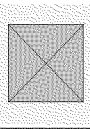
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more



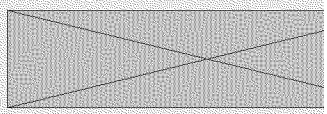


complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper Now!

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From: Snyder, Jim
Required Attendees: Ex. 7
Ex. 7
Location: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE
Importance: High
Subject: Canceled: VW Diesel DEF Refueling Strategy
Start Date/Time: Wed 7/16/2014 5:00:00 PM
End Date/Time: Wed 7/16/2014 6:00:00 PM

When: Wednesday, July 16, 2014 1:00 PM-2:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-C35-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

We already discussed the issues in this morning's mtg.

From: Ex. 6
Required Attendees: Knott, Dave; Sohacki, Lynn; Liebner, Bernd; Snyder, Jim; Ball, Joel; Wright, DavidA; Garrison, Bruce; Maury, Mark; Bolitho, Joseph; dennis.reineke@vw.com; tobias.glas@vw.com
Location: EPA Lab Garage 325 Area
Importance: Normal
Subject: M2 Pre-Test Vehicle Inspection T132RXX-0125
Start Date/Time: Wed 7/23/2014 12:30:00 PM
End Date/Time: Wed 7/23/2014 2:00:00 PM

T132RXX-0125 (2012 Audi / A5) - VIN# Ex. 6

If you have questions please call:

Ex. 6
Jacobs Technology; Contractor to the EPA
Ex. 6

From: Ex. 6
Required Attendees: Knott, Dave; Sohacki, Lynn; Liebner, Bernd; Snyder, Jim; Ball, Joel; Wright, DavidA; Garrison, Bruce; Maury, Mark; Bolitho, Joseph; dennis.reineke@vw.com; tobias.glas@vw.com
Location: EPA Lab Garage 325 Area
Importance: Normal
Subject: M2 Pre-Test Vehicle Inspection T132RXX-0101
Start Date/Time: Wed 7/23/2014 4:30:00 PM
End Date/Time: Wed 7/23/2014 6:00:00 PM

T132RXX-0101 (2012 Audi / A5) - VIN# Ex. 6

If you have questions please call:

Ex. 6
Jacobs Technology; Contractor to the EPA
Ex. 6

From: Ex. 4 - CBI
Required Attendees: Knott, Dave; Sohacki, Lynn; Liebner, Bernd; Snyder, Jim; Ball, Joel; Wright, DavidA; Garrison, Bruce; Maury, Mark; Bolitho, Joseph; dennis.reineke@vw.com; tobias.glas@vw.com
Location: EPA Lab Garage 325 Area
Importance: Normal
Subject: M2 Pre-Test Vehicle Inspection T132RXX-0101
Start Date/Time: Wed 7/23/2014 4:30:00 PM
End Date/Time: Wed 7/23/2014 6:00:00 PM

T132RXX-0101 (2012 Audi / A5) - VIN# Ex. 4 - CBI

If you have questions please call:

Ex. 4 - CBI
Jacobs Technology; Contractor to the EPA
Ex. 4 - CBI

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Wed 7/16/2014 8:05:50 PM
Subject: Parameters for a second vehicle being brought in next week
parameters form cold CO and US06 CO.xlsx

Hi, Tobias.

The following vehicle will be brought in next week:

Ex. 7 Tuesday) vehicle pick up @ 0915.

Please fill the attached parameter sheet (including the new second tab) and return it to me. When including instructions for disabling traction control, please include a description and location of the icon.

I told Jacobs, our contractor, that Thursday would probably be a better day to oversee the maintenances so, hopefully, they will be able to schedule both on Thursday. You will be contacted by them soon to confirm your availability.

Thanks,

Lynn Sohacki

EPA, Compliance Division

734-214-4851

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Wed 7/16/2014 8:22:38 PM
Subject: Notificaiton of Selection of EPA In-Use Class T132

Ex. 7

Hi, Tobias.

I recently sent a letter to your company as notification of an upcoming in-use class. Attached, please find a final copy of that letter for your convenience. Let me know if you have any questions.

Thank you,

Lynn Sohacki

Compliance Division

Environmental Protection Agency

734-214-4851

734-214-4869 fax

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2565 PLYMOUTH ROAD
ANN ARBOR, MICHIGAN 48105-2498

OFFICE OF
AIR AND RADIATION

July 16, 2014

Mr. Dennis Reineke
Volkswagen of America
3800 Hamlin Road
Auburn Hills, Michigan 48326

Dear Mr. Reineke,

The Environmental Protection Agency will test a 2012 model-year Audi test-group in our surveillance test-program. The group shown in Enclosure 1 will be tested at the National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan. Test results which exceed applicable standards may lead to confirmatory testing.

A sample of three or more vehicles will be procured. Maintenance will consist of an under-hood inspection and review of on-board computer codes. The federal test procedure, highway cycle, and US06 test will follow a single LA-4 preconditioning cycle. If this test-group contains models which are two-wheel drive with selectable four-wheel drive or selectable all-wheel drive, the vehicles may be tested in either of those modes.

Vehicles in this class may be subjected to an evaporative test and/or Cold CO testing. Additionally, fault conditions may be introduced on one or more of the vehicles to test the response of the On-Board Diagnostics (OBD) system. If you are aware of OBD enabling criteria which would limit our ability to evaluate these systems, please inform me. Copies of the OBD enabling criteria which were approved during certification should be provided if there are such limitations.

We invite your representatives to be present as observers during the test program. If you have any questions concerning this investigation please contact me.

Sincerely,

Lynn Sohacki

Lynn Sohacki
Compliance and Innovative Strategies Division

Enclosure

VW FOIA, EPA 06/20/2017 2017-FFP_013735

ENCLOSURE 1

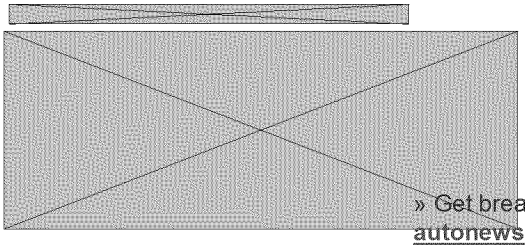
Lab	NVFEL Ann Arbor, Michigan
Test Group	Ex. 7
Estimated Start Date	Week-ending July 25, 2014
Recall/Testing Representative	Lynn Sohacki
Telephone Number	(734) 214-4851
Email Address	Sohacki.lynn@epa.gov
Class Numbers	Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 7/16/2014 8:41:48 PM
Subject: DAILY: GM revises how legal staff handles safety suits | U.S. bill would fine, imprison execs who conceal product dangers | BMW recalls 1.6M cars to replace Takata airbags | SUVs, crossovers top sedans in popularity | Smart revamps lineup

Today's most read story

How Warren Buffett landed a new Cadillac (and not a Subaru)

July 16, 2014



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TOP NEWS

THE GM RECALL

GM revises way legal staff handles safety suits

UPDATED: 7/16/14 2:04 pm ET
9:35 pm U.S. ET | Jul 15

GM has hired an outside legal firm to review the company's litigation practices and has revised the way it handles civil lawsuits so that cases involving serious injuries or deaths will be reviewed by the company's general counsel and engineering staffs, GM's top lawyer plans to tell a Senate panel on Thursday. ... » READ

Hide No Harm Act would fine, imprison execs who conceal product dangers

UPDATED: 7/16/14 1:45 pm ET -- updates announcement
10:19 am U.S. ET | Jul 16

Two senators today unveiled a bill prompted by the General Motors recalls over defective ignition switches

that would make it a crime for corporate officers to conceal dangers posed by their products. ... » READ

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This generation changed the car buying process. Google defined it. You can revolutionize it. Learn how to get ahead of the ZMOT by reaching more new buyers and increasing retention among current customers before they even think to look anywhere else.

Download the whitepaper.

BMW to recall 1.6 million 1999-2006 3-series cars to replace Takata airbags

UPDATED: 7/16/14 2:08 pm ET -- adds details, background

7:58 am U.S. ET | Jul 16

German automaker BMW said today it is recalling about 1.6 million cars worldwide to replace passenger-side front airbags made by Takata Corp. because the inflators could break apart during deployment and injure passengers. ... » READ

VW sets sights on Apple-like model updates with speed task force

1:04 pm U.S. ET | Jul 16

VW plans to mimic the fast-paced rollouts of products made by the likes of Apple to adapt quicker to changing customer demands for technology in its cars. ... » READ

Daimler seeks to jumpstart Smart with revamped ForTwo, new 4-seat model

10:10 am U.S. ET | Jul 16

Smart took the wraps off a four-seat model that it hopes will give the small-car brand a more solid foundation. The new ForFour was unveiled today alongside the latest version of the ForTwo two-seater. ... » READ

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LINDSAY CHAPPELL

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SUVs, crossovers top sedans in U.S. popularity for first time, study says

2:35 pm U.S. ET | Jul 16

Tesla Model III to start at $35,000, compete with BMW 3 series

UPDATED: 7/16/14 12:57 pm ET -- adds price, details

6:37 am U.S. ET | Jul 16

Tesla settles lemon law case

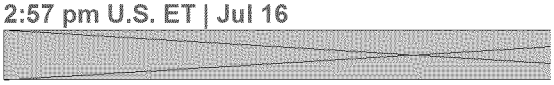
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» January 13-14 - Automotive News World Congress

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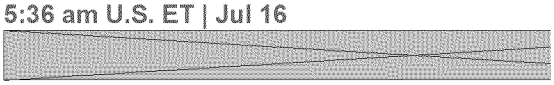
with Wisconsin man for $126,836

2:57 pm U.S. ET | Jul 16



Jaguar to unveil XE sedan at London event

5:36 am U.S. ET | Jul 16



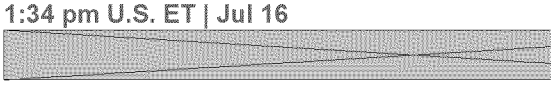
Ford to tout new F-450 towing capacity, hp, torque as best in class

12:29 pm U.S. ET | Jul 16



GM's global sales rise 0.5% in 2nd quarter, trail VW

1:34 pm U.S. ET | Jul 16



Driverless cars will require industry shift, Nissan scientist says

10:17 pm U.S. ET | Jul 15



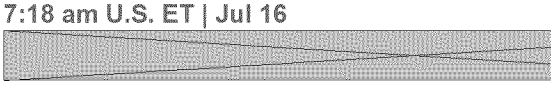
2015 Tokyo Motor Show to return to October after schedule mishap

11:03 am U.S. ET | Jul 15



Toyota delays delivery of 23,000 vehicles covered by neighbor's tar, soot

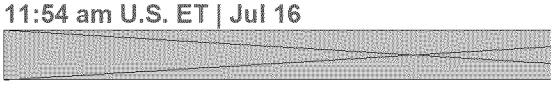
7:18 am U.S. ET | Jul 16



Penske Automotive hikes dividend for 3rd time in 6 months

UPDATED: 7/16/14 4:04 pm ET -- correction

11:54 am U.S. ET | Jul 16



Tesla asks hackers at Beijing

contest to report vulnerabilities

8:26 am U.S. ET | Jul 16

Visteon transferring $350 million in pension assets to Prudential

1:40 pm U.S. ET | Jul 16

Nissan latest automaker to suspend South Africa production amid strike

8:18 am U.S. ET | Jul 16

Hyundai, Kia tune into tuning

12:01 am U.S. ET | Jul 14

» July 30 - Marketing Market Price

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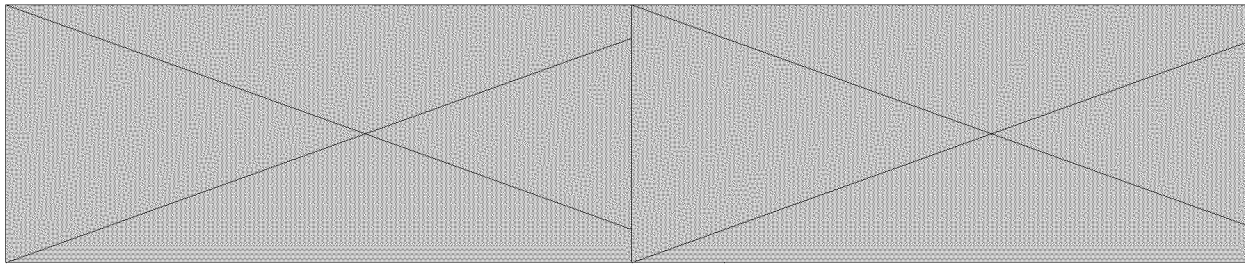
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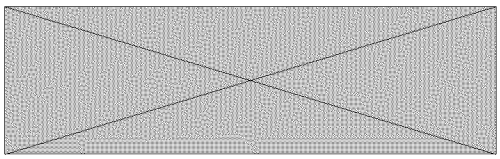
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 7/17/2014 1:11:21 PM
Subject: A.M. NEWSCAST: GM, Delphi to face Senate today | Fiat denies merger talks with VW | Nissan dials back self-driving timeline | Chrysler touts towing

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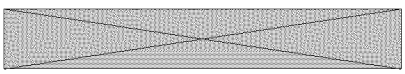
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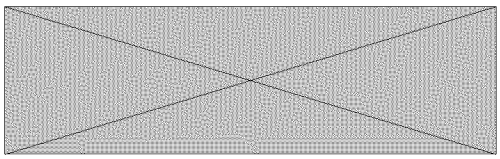
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From: Automotive News
Sent: Thur 7/17/2014 1:15:25 PM
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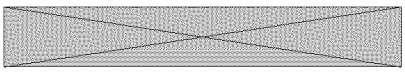
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To: Dalton, Joel[Dalton.Joel@epa.gov]; Fernandez, Antonio[fernandez.antonio@epa.gov]; Ball, Joel[ball.joel@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Healy, Stephen[healy.stephen@epa.gov]; Ganss, David[GanssD@nrd.nissan-usa.com]
From: Snyder, Jim
Sent: Thur 7/17/2014 1:56:08 PM
Subject: Volkswagen Interested In Buying Fiat

Once again Chrysler could be German controlled…

http://www.thetruthaboutcars.com/2014/07/volkswagen-interested-in-buying-fiat/#more-867258

German business publication Manager Magazin is reporting that Volkswagen could be interested in acquiring Fiat, as the Agnelli family, which controls the industrial conglomerate, is looking to exit the volume car manufacturing business.

According to the article, the Agnelli family would retain Ferrari, while Volkswagen would benefit from Chrysler and its associated brands by giving it a foothold in America, where it has traditionally struggled to gain a foothold. No word on what would happen to Alfa Romeo, Maserati or other brands in the FCA portfolio. VW CEO Ferdinand Peich has long coveted Alfa Romeo.

Any deal would be faced with a number of obstacles, including financial issues and inevitable consolidation of the respective brand portfolios. But the Agnelli family's desire to exit the volume car manufacturing business is a wise one, given the constantly shaky market conditions in Europe, their exposure to the hardest hit regions of that continent and the massive overcapacity crisis currently plaguing its assembly plants. By contrast, Ferrari is a license to print money, generating enormous profits from its merchandising arm alone. Sergio Marchionne has long said that economies of scale above 6 million units are required to survive in this next era of the automotive business – this may be the most expedient way for him to achieve that goal.

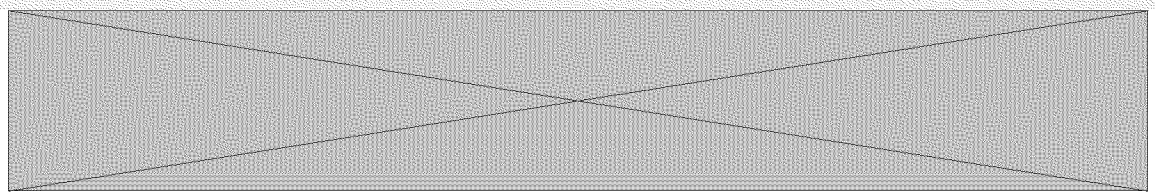
Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

consolidation of the respective brand portfolios. But the Agnelli family's desire to exit the volume car manufacturing business is a wise one, given the constantly shaky market conditions in Europe, their exposure to the hardest hit regions of that continent and the massive overcapacity crisis currently plaguing its assembly plants. By contrast, Ferrari is a license to print money, generating enormous profits from its merchandising arm alone. Sergio Marchionne has long said that economies of scale above 6 million units are required to survive in this next era of the automotive business – this may be the most expedient way for him to achieve that goal.

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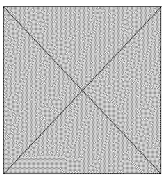
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Thur 7/17/2014 4:04:24 PM
Subject: Green Car Report Daily Headlines

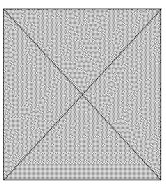
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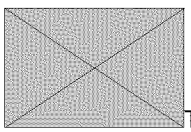
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2016 Smart ForTwo Details, 2016 Mazda 2 Revealed, BMW i3 REx Sales: Today's Car News

Jul 17, 2014 03:20 pm | feedback@highgearmedia.com (Stephen Edelstein)

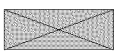


Today on Green Car Reports: Everything you need to know about the 2016 Smart ForTwo, first details on the 2016 Mazda 2, and a breakdown of 2014 BMW i3 REx and battery-only sales. All this and more on Green Car Reports. Everything you need to know about the all-new 2016 Smart ForTwo minicar. We've got live photos from the world debut, too. Detroit...

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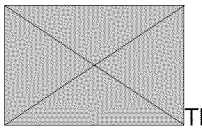






2014 BMW i3: Is Range Extended Version Outselling Battery Only?

Jul 17, 2014 01:19 pm | feedback@highgearmedia.com (John Voelcker)



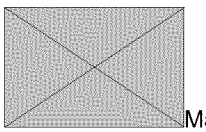
The 2014 BMW i3 electric car has a unique feature offered by no other vehicle in the world: Buyers can choose to have it as a battery-electric vehicle, or add an optional range-extending engine that roughly doubles its rated electric range of 81 miles. With the i3 on

sale now for two months, a mix of the two variants has been delivered. So you...

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2016 Mazda 2 Revealed: First Details And Images

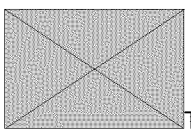
Jul 17, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 Mazda has revealed the first official pictures and details of the new Mazda2 subcompact. Unsurprisingly, it bears striking resemblance to the Hazumi concept launched at the Geneva Motor Show earlier this year, and utilizes the firm's now-standard 'Kodo' design language. That means a familiar grille design and flowing curves, which work almost as...

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Audi A3 e-Tron Plug-In Hybrid: Not A Compliance Car, Exec Says

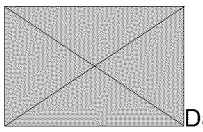
Jul 17, 2014 12:00 pm | feedback@highgearmedia.com (John Voelcker)

 Two years ago, we described the difference between high-volume electric cars and "compliance cars"--those built in very limited numbers solely to meet California rules that require a certain number of zero-emission vehicles to be sold each year. Now it appears that manufacturers don't want new plug-in electric models to be seen as compliance cars...

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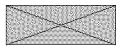
2016 Smart ForTwo And ForFour: World Debut Live Photos

Jul 17, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 Daimler will be hoping that third time is the charm with the new third-generation 2016 Smart Fortwo and its four-seat counterpart. The all-new models have now been revealed in all their glory at the launch event in Berlin, and while several facets of the brand's values remain, a whole lot has changed too. For now, only the two-seat Fortwo has been...

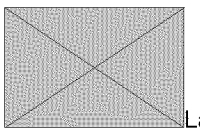
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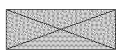
Is Detroit Responding To Tesla Patent Offer With Collective 'Meh'?

Jul 17, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 Last month, electric car maker Tesla Motors took the unusual step of opening up its patents to other automakers. Automakers usually guard their patents very closely, ensuring them as much competitive advantage as they can get away with before someone builds something better. Open Tesla's patents may now be, but as far as America's Big Three...

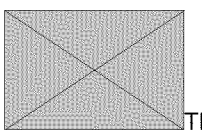
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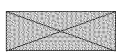
2016 Smart ForTwo: What You Should Know About All-New Minicar

Jul 16, 2014 06:30 pm | feedback@highgearmedia.com (Matthew Askari)

 The new Smart ForTwo and Smart ForFour minicar models have just made their world debuts in Berlin, and we've got the details. Thus far, only the two-seat Smart ForTwo has been confirmed for the U.S. It will launch as a 2016 model. While the Smarts will offer buyers in most markets a choice between two three-cylinder engines, the U.S. will receive...

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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Reineke, Dennis (EEO)[Dennis.Reineke@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 7/17/2014 7:14:12 PM
Subject: RE: VW Group - Lab Calulation Question
EPA Test 2014-0178-004.pdf

Hi Jim,

The Verify data only includes the weighted IntTHC results derived from the Net Concentrations from each phase. I underlined the values in question in the attached lab print report that appear unadjusted for Ambient concentrations. The use of these numbers result in a weight IntTHC nearly 4-times higher than our results.

Regards,

Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 17, 2014 1:52 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

I'll have to look into it. Do you know if this is calculation is also done in Verify or is this upstream of Verify calculations. I ask because there are some calculations that Verify does independently and correctly that the lab does differently but aren't not used by Verify.

Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, July 17, 2014 1:44 PM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: VW Group - Lab Calulation Question

Hello Jim,

We have noticed what appears to be a discrepancy in recent THC calculations provided by your lab. It appears for diesel concepts the lab is using Integrated THC without subtracting Ambient concentrations as referenced in the CFR40 86.144-94. For example test number 2014-0178-004 dated 7-2-2014, you will see that raw IntTHC was used for calculating the phase net concentrations, instead of an Ambient adjusted Net IntTHC.

Please let us know if which calculation procedure is correct.

Regards,

Bill Rodgers

VWGoA EEO

(248) 754-4219

CERT

CVS

NVFEL Laboratory Test Data

Final Laboratory Test Results- Refer to VERIFY Reports for Official Data

Test Number: 2014-0178-004 Vehicle ID: VW370 50379 /15

Test Information

Test Date: 7/2/2014
Key Start / Hot Soak: 07:30:34 / 09:30
Fuel Container ID: F00022
Fuel Type: 19 Cert Diesel 7-15 ppm Sulfur
Test Procedure: 2
Calculation Method: Diesel
Pretest Remarks:

MFR Name: Volkswagen Group of
MFR Codes: 10015 VGA
Config #: 02
Transmission: AUTO
Shift Schedule: A09980005
Beginning Odometer: 003972.0 MI
Drive Schedule: ftp3bag
Soak Period: 21.5 hours

Bag Data	THC / IntTHC	CO	NOx	CO2	CH4	NonMeth HC
Phase 1	(ppmC)	(ppm)	(ppm)	(%)	(ppm)	(ppmC)
Sample	4.236 / 4.382	8.077	2.539	0.677	2.851	
Ambient	2.332	0.000	0.019	0.046	2.047	
Net Concentration	2.021 / 4.382	8.077	2.521	0.633	0.907	3.407

Remarks:

Phase 2						
Sample	3.044 / 3.076	0.356	0.044	0.430	2.503	
Ambient	2.306	0.000	0.010	0.045	2.052	
Net Concentration	0.813 / 3.076	0.356	0.035	0.386	0.517	2.520

Remarks:

Phase 3						
Sample	2.847 / 2.943	0.469	0.480	0.582	2.360	
Ambient	2.292	0.000	0.013	0.046	2.053	
Net Concentration	0.655 / 2.943	0.469	0.468	0.538	0.396	2.518

Remarks:

Phase 4						
Sample						
Ambient						
Net Concentration						

Remarks: This test has particulate results.

Results	THC / IntTHC	CO	NOx	CO2	CH4	NMHC / NMOG	Vol MPG
	(gpm)	(gpm)	(gpm)	(gpm)	(gpm)	(gpm)	(mpg)
Phase 1	- / 0.057	0.212	0.099	260.7	0.014	0.044	39.177
Phase 2	- / 0.064	0.015	0.002	253.1	0.012	0.052	40.397
Phase 3	- / 0.038	0.012	0.018	221.3	0.006	0.033	46.216
Weighted	0.05522	0.05490	0.02668	245.897	0.01086	(NMOG=NMHC) 0.04513	

Fuel Economy	Diesel MPG
Phase 1	38.96
Phase 2	40.17
Phase 3	45.96
Weighted	41.32

Dyno Settings
Aug Brake
Y

Dyno #: D329 - FWD
Inertia: 3625
EPA Set Co A: 2.53
EPA Set Co B: 0.2047
EPA Set Co C: 0.01574

Emiss-Bench: Mexa 7200dle

VW FOIA, EPA 06/20/2017 2017-FFP_013755

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Thur 7/17/2014 7:19:08 PM
Subject: RE: VW Group - Lab Calulation Question

Ok thanks and have a good weekend.

-Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 17, 2014 3:18 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

Okay I'll Look at this and then I'll have to take it up with the lab. I am off tomorrow and am trying to complete some cert reviews today so this won't get my attention until next week.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, July 17, 2014 3:14 PM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

Hi Jim,

The Verify data only includes the weighted IntTHC results derived from the Net Concentrations from each phase. I underlined the values in question in the attached lab print report that appear unadjusted for Ambient concentrations. The use of these numbers result in a weight IntTHC nearly 4-times higher than our results.

Regards,

Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 17, 2014 1:52 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

I'll have to look into it. Do you know if this is calculation is also done in Verify or is this upstream of Verify calculations. I ask because there are some calculations that Verify does independently and correctly that the lab does differently but aren't not used by Verify.

Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, July 17, 2014 1:44 PM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: VW Group - Lab Calulation Question

Hello Jim,

We have noticed what appears to be a discrepancy in recent THC calculations provided by your lab. It appears for diesel concepts the lab is using Integrated THC without subtracting Ambient concentrations as referenced in the CFR40 86.144-94. For example test number 2014-0178-004 dated 7-2-2014, you will see that raw IntTHC was used for calculating the phase net concentrations, instead of an Ambient adjusted Net IntTHC.

Please let us know if which calculation procedure is correct.

Regards,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Sosnowski, Dave[Sosnowski.Dave@epa.gov]
Cc: Ex. 6
From: Ball, Joel
Sent: Thur 7/17/2014 7:51:24 PM
Subject: FW: 140517286

Hi Dave,

Could you please look into this issue. I spoke with this individual, his vehicle fails the state inspection in Illinois due to lack of communication with the testing equipment. However when he took the vehicle to the Volkswagen dealer they were able to communicate with their diagnostic equipment and found nothing wrong with the vehicle. As you can see he feel stuck in the middle.

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

From: Ex. 6
Sent: Tuesday, July 15, 2014 10:38 AM
To: Ball, Joel
Subject: Fwd: 140517286

Joel, I left you a voice mail earlier today. This is the issue mentioned. Please call me at your convenience at Ex. 6

Thank you.

---------- Forwarded message ----------
From: Ex. 6
Date: Tue, Jul 15, 2014 at 9:34 AM
Subject: 140517286

To: vwcustomercare@vw.com

Dear Ex. 6

Thank you for your time today talking about my challenging problem. I appreciate your listening and compassion. I've mostly enjoyed the VW Rabbit so this situation is rather traumatizing to me as I feel rather stuck between the EPA, the state testing (which I've learned is done differently in every state and

As you know, the EPA mandates emissions repairs on all vehicles less than 8 years old or 80,000 miles on it (please review http://www.epa.gov/obd/pubs/420f09048.pdf). Despite the highly friendly best efforts of Conrad at City Volkswagen as an initial courtesy, which I deeply appreciated, we have not gotten to the root cause of the issue and the problem is not yet solved.

The car has failed 3 times so far. Unfortunately, I do not currently feel any closer to resolving this issue than when I started. As I'm currently unemployed, I do not have available resources to fund an open ended diagnosis. Nor should I have to. No car built to the right quality standards should even be having this problem at less than 40,000 miles on any car.

I feel stuck in a black hole between the EPA, the State of IL emissions testing, the dealer and VW corporate. The bottom line is that the OBD can't be read but the emissions testing place lacks the power to mandate a certain manufacturer repair and there is no way for me to do any of the following:

1) Know I'm focused on the right problem

2) A clear path to a no cost or cost effective solution - there is one repair shop in the region that allegedly charges $49 for a diagnosis and guarantees their repair work or your money back. The problem with that option is that as we discussed you won't accept their OBD determination.

I'd be forever appreciative if you could get upper VW management to fund the discovery that you suggest at City Volkswagen needs to do for us to proceed under the spirit of the warranty repair rather than the legalities of it. This action would restore my trust in a product I like overall an would likely make me a customer for life. Failure to fix it likely means I could never buy a VW in good faith again.

I look forward to your help in resolving this problem.Thank you.

Ex. 6

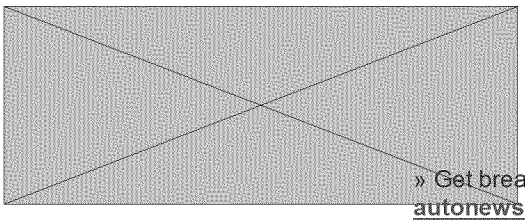
The content of this email is private unless otherwise noted.
Please excuse any typos from my mobile device

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From: Automotive News
Sent: Thur 7/17/2014 8:44:54 PM
Subject: DAILY: Fiat, VW deny merger report | Barra defends GM's top lawyer as senators call for more changes | '15 Ford Mustang horsepower ratings | Chrysler accelerates Jeep repairs | Ghosn resets Nissan's autonomous car timeline

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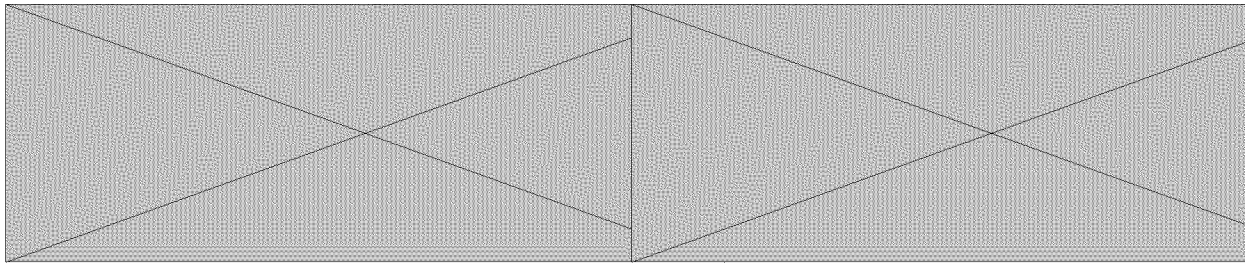
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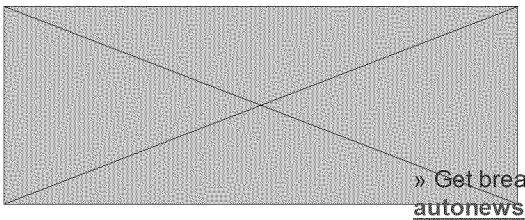
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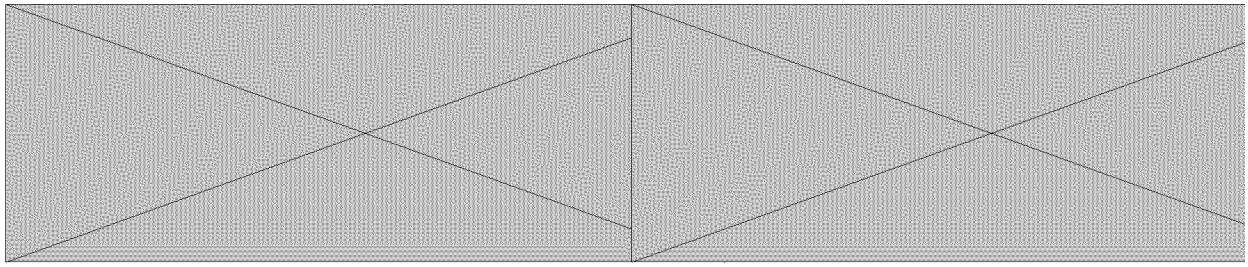
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Cc: Ex. 7

Ex. 7

From: Ex. 7
Sent: Fri 7/18/2014 3:25:54 PM
Subject: USEAP/Volkswagen Meeting - Tier 3 Implementation
EPA Meeting Report Tier 3 Implementation July 16 2014 Draft.pdf
8_Carry-over-Examples_update1.pdf

To all:

On July 16, 2014, representatives from the Volkswagen Group met with EPA staff to discuss topics related to the implementation of the Tier 3 requirements. Copies of the presentation materials were distributed by e-mail on July 15, 2014. Subsequent to the meeting, Volkswagen prepared a meeting report. It presents a brief discussion and conclusions drawn for each of the agenda topics. It also points out areas where further action is required and/or EPA confirmation is requested (specified in bold typeface).

We would particularly like to direct EPA's attention to Agenda Item 8, LEV III Certification and Carryover to Tier 3. A revised version of the slides for this item is attached. The revisions are shown in red. Slide 7 from the original deck addressed the topic of Tier 3 Evap. This is not included in the new deck since we agreed on the information presented and do not believe that further discussion is required. Slides 6 and 7 of the new deck address the topic of applicable test procedures and carryover implications. The new Slide 7 presents Volkswagen's understanding of the EPA explanation from the meeting regarding the test procedures that apply to various vehicle concepts, assuming that the concepts are "carried over" through their lifespan. The test procedures referred to as Part 1066 Stage 1 and Stage 2, are as described on the new Slide 6. Slides 8 and 9 are included for reference.

Volkswagen appreciates the opportunity to meet with you, and looks forward to your comments on the report.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

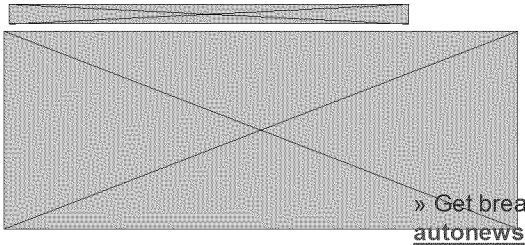
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From: Automotive News
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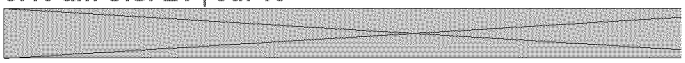
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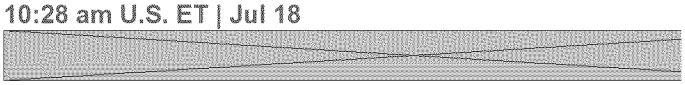
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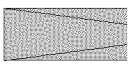


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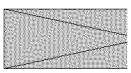
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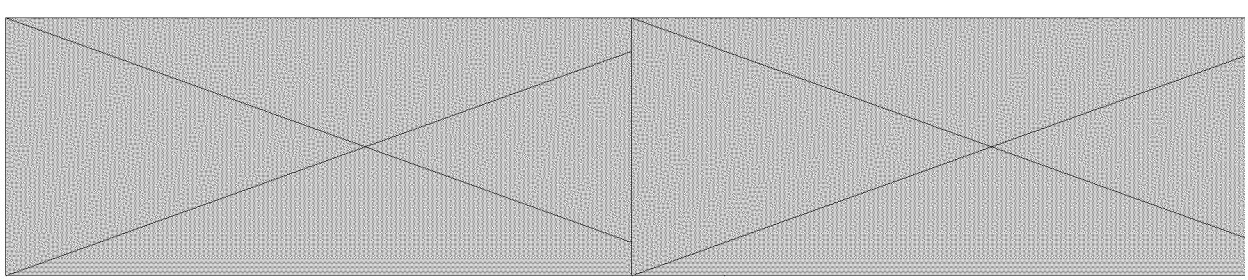
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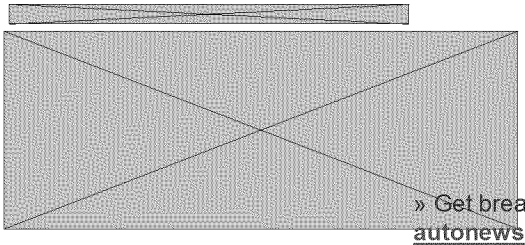
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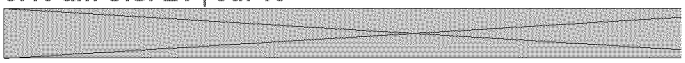
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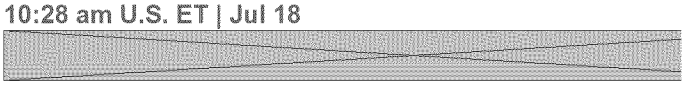
Tesla makes the shopping list as U.K. eyes greener government fleet

10:34 am U.S. ET | Jul 18

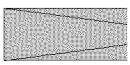


Continental Structural Plastics to buy 5 plants from Magna

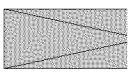
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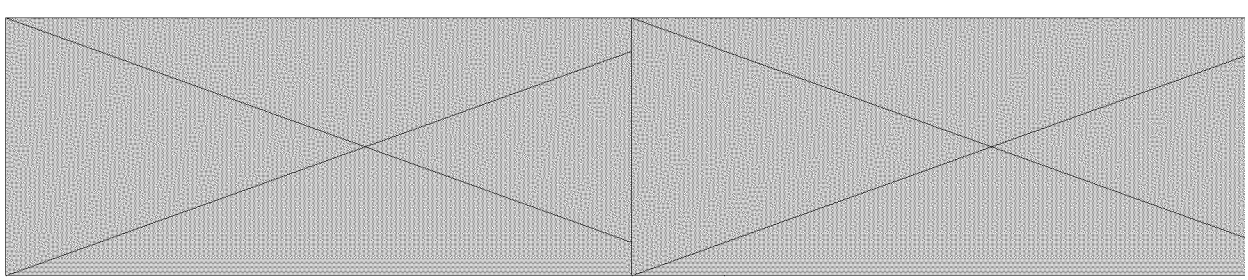
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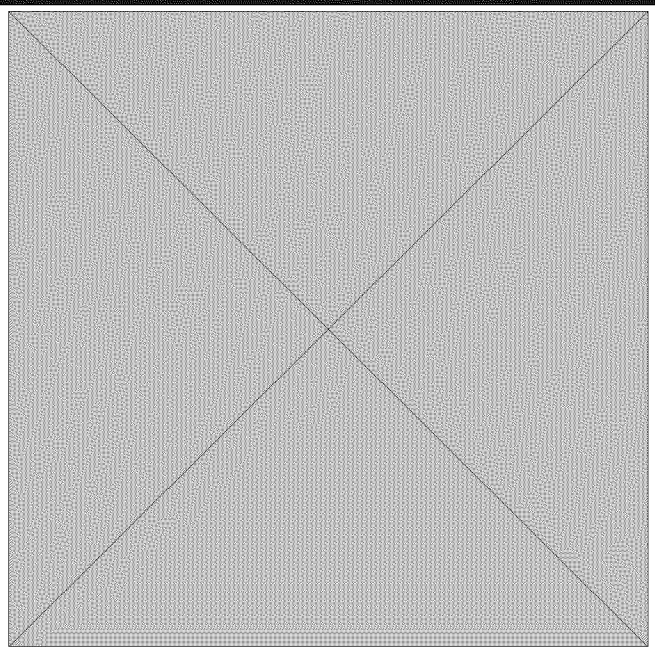
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: DrivingtheNation.com newsletter
Sent: Fri 7/18/2014 9:43:28 PM
Subject: 7/11/14 - GMC/Chevy trucks,VW & Bosch,MINI space,Cadillac CTS, washingtonpost.com, list your used car for free

Carlist classifieds

- 2010 Nissan Cube s/sl/krom
- 2011 Toyota Camry/se/le/xle
- 2000 Jeep Cherokee sport
- 2011 Kia Optima lx
- 2013 Subaru Outback 2.5i premium

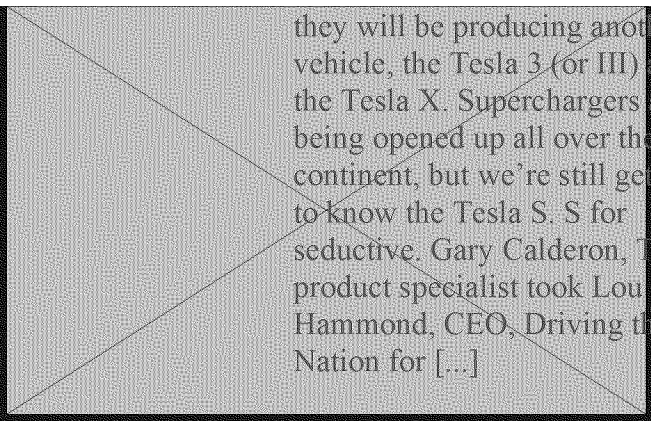
Warren Brown and Lou Ann Hammon about cars on www.washingtonpost.c 18, 2014



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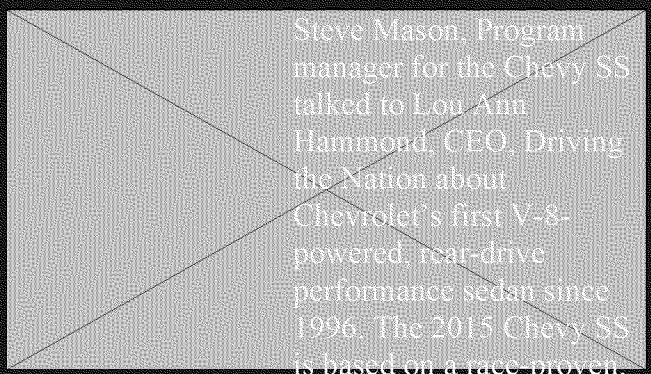
Tesla Motors has just announced



they will be producing another vehicle, the Tesla 3 (or III) after the Tesla X. Superchargers are being opened up all over the continent, but we're still getting to know the Tesla S. S for seductive. Gary Calderon, Tesla product specialist took Lou Ann Hammond, CEO, Driving the Nation for [...]

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Steve Mason, Program manager for the Chevy SS talked to Lou Ann Hammond, CEO, Driving the Nation about Chevrolet's first V-8-powered, rear-drive performance sedan since 1996. The 2015 Chevy SS is based on a race-proven, global platform that underpins the Camaro, and, in Australia, the high-performance Holden VF Commodore. The lightweight aluminum hood and deck [...]

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VW's Marc Trahan on future products, the B-class

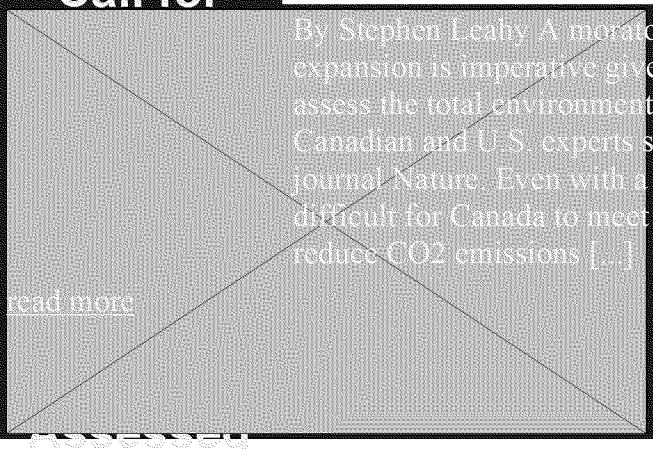
SUV and more, on Driving the Nation



Marc Trahan, Marc Trahan, executive vice president of quality for Volkswagen in the U.S, talked to Lou Ann Hammond, CEO, Driving the Nation about future products, the B-class SUV. Why does it take so long for Volkswagen to bring European vehicles to the U.S. market? Will that change? Why are there two different rear suspensions [...]

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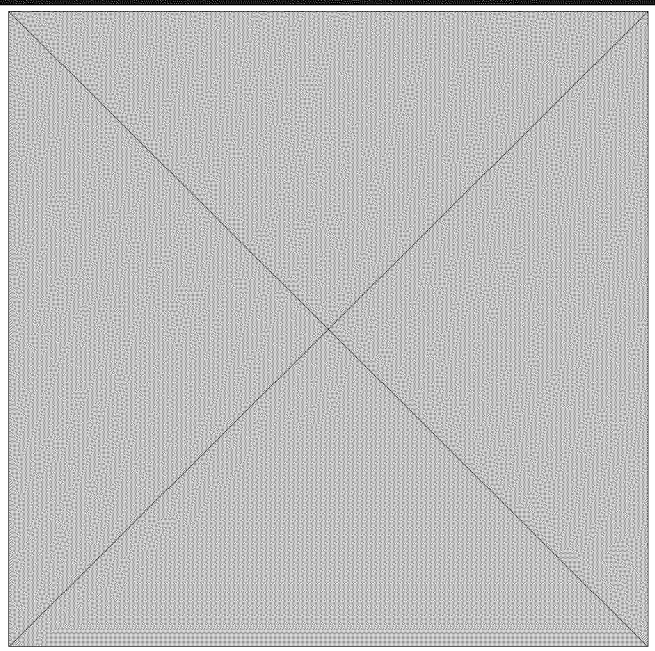
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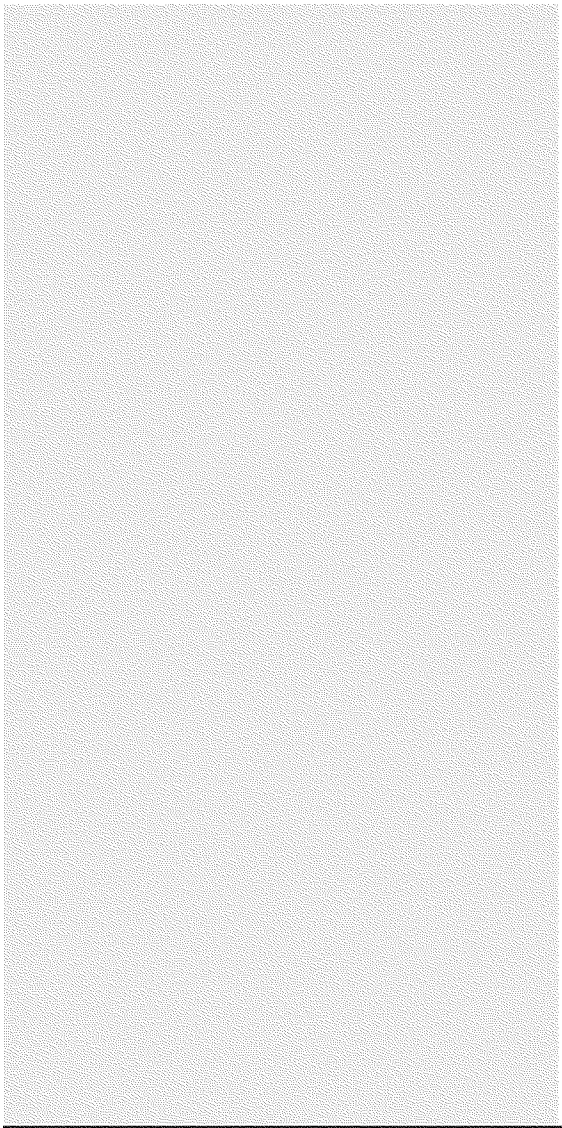
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: DrivingtheNation.com newsletter
Sent: Fri 7/18/2014 10:35:53 PM
Subject: 7/18/14 - Tesla S testdrive, Chevy SS, VW SUV, moratorium on Oil Sands, washingtonpost.com, list your used car for free

Carlist classifieds

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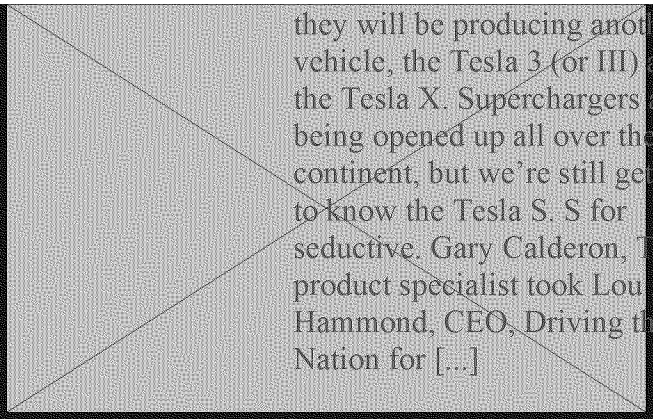




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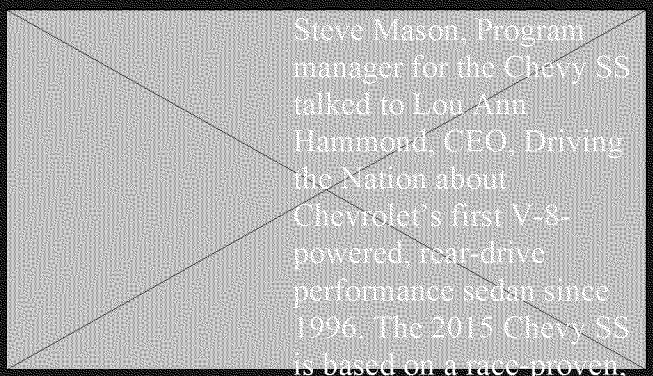
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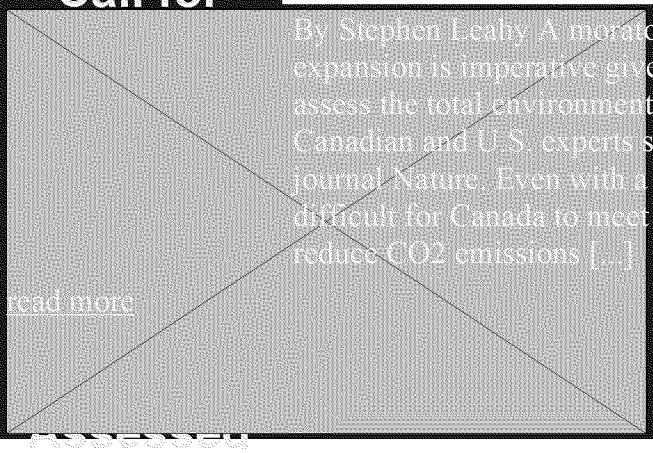
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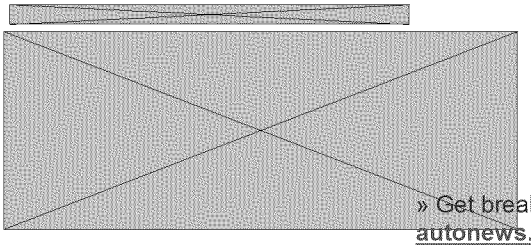
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From: Automotive News
Sent: Mon 7/21/2014 8:33:30 PM
Subject: DAILY: Tesla idles Calif. plant to retool for electric SUVs | Russia's Severstal to sell U.S. plants for $2.3 billion | Group 1 acquires Munday dealerships in Houston

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July 21, 2014



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3:37 pm U.S. ET | Jul 21

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Russia's Severstal sells U.S. steel plants to AK Steel, Steel Dynamics

UPDATED: 7/21/14 12:12 pm ET - adds details

8:48 am U.S. ET | Jul 21

Russia's Severstal said it agreed to sell its two steel plants in the United States for $2.3 billion, withdrawing from the market at a time of rising tension between Russia and the West and turning its focus to its domestic business. ... » READ

Group 1 acquires Munday dealerships in Houston

3:59 pm U.S. ET | Jul 21

Group 1 Automotive, the third-largest auto dealer group based in the United States, has acquired Houston dealerships Munday Chevrolet and Munday Mazda, the company said today. ... » READ

Hyundai's Sprinter fighter?

12:01 am U.S. ET | Jul 21

This lightly disguised Hyundai being tested in the California desert shows the Korean automaker preparing a move into the newly crowded commercial van segment against the Mercedes-Benz Sprinter, Ford Transit and Ram ProMaster. ... » READ

Nick Scheele, former president and COO of Ford, dies at age 70

UPDATED: 7/20/14 12:23 pm ET - details added

4:43 pm U.S. ET | Jul 18

Nick Scheele, an affable, globe-trotting troubleshooter and tough-nosed negotiator who served as president and COO of Ford, died Friday. He was 70. Scheele, working under then-CEO Bill Ford, led the troubled automaker's turnaround plan after the departure of former CEO Jacques Nasser. ... » READ

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LARRY P. VELLEQUETTE

Let's hope for a litter of Hellcat kitties

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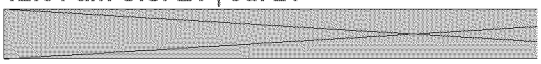
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Honda asks dealers to add

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12:01 am U.S. ET | Jul 21



Aluminum's per-vehicle use expected to rise 56% from 2012 to 2025

12:01 am U.S. ET | Jul 21



GM halts sale of some Cadillac CTS models over switch issue

7:24 pm U.S. ET | Jul 19



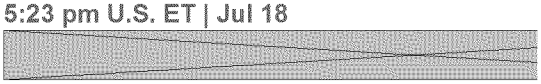
ZF needs TRW's tech know-how, CFO says

8:54 am U.S. ET | Jul 19



Chrysler tells supplier to boost hitch output

5:23 pm U.S. ET | Jul 18



Japan to dangle nearly $20,000 in subsidies to spur fuel-cell sales

9:05 am U.S. ET | Jul 19



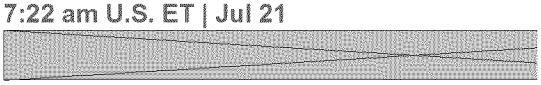
Toyota defends U.S. Hispanic market lead as segment grows

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Volvo, ABB to develop fast-charging buses

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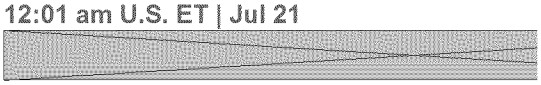
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» Oct. 15 - Best Dealerships To Work For
» Nov. 13-14 - Automobilwoche Kongress
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» January 22 -

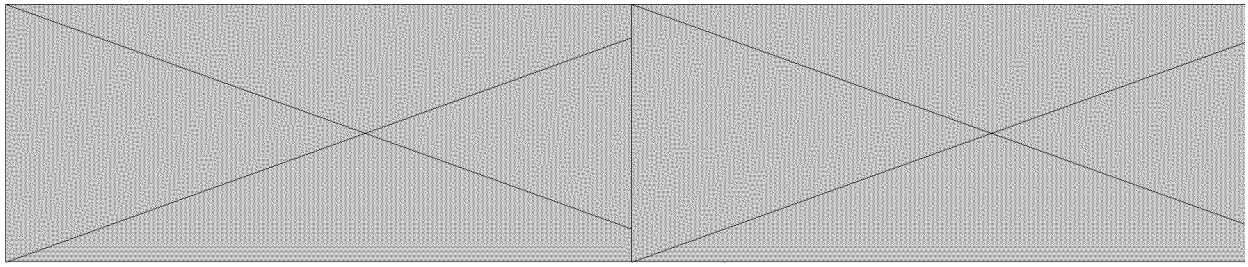
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From: John Cabaniss
Sent: Mon 7/21/2014 8:38:27 PM
Subject: Retirement; End of August

Friends and Colleagues,

In case you haven't heard, I have officially announced my retirement at the end of August, after almost 20 years here at the association. See email below from our President and CEO, John Bozzella. I am pleased to report that Julia Rege, who has been with us for just over 3 years, will be assuming my post as Director, Environment & Energy, effective September 1. Please let others know that I will be retiring. My last day in the office is August 29. I will be working part-time (as a consultant to the association) for at least the six months following that date, so I won't be completely disappearing.

The association is planning a retirement party on the evening of September 17th. I will let you know the details once they are firmed up, in case any of you want to come and make sure I really leave.

I truly appreciate the years of valued friendship and support, both when I was at EPA and since I have been with the association. Altogether, it's been a great ride for the past 40+ years since I

started working on environmental matters in 1972 working for the Virginia Air Pollution Control Board.

Best regards.

John

John M. Cabaniss, Jr.

Director, Environment & Energy

Association of Global Automakers, Inc.

1050 K Street, NW Suite 650

Washington, DC 20001

202.650.5562 (direct)

202.650.5555 (main)

From: John Bozzella
Sent: Tuesday, July 01, 2014 3:44 PM
To:
Subject: Personnel Announcements

TO: Global Automakers Board of Directors and Environment & Energy Committee

As some of you may know, after nearly 20 years with the Association, John Cabaniss has decided to retire. With a B.S. from Virginia Tech and MBA from VCU, John has spent most of his career in the auto industry. Before he joined the Association, he spent 15 years with the EPA working with mobile source emissions matters, both in

Washington DC and Ann Arbor. John's knowledge, perspective and experience has been a tremendous asset to Global Automakers as we have moved from criteria tail pipe pollutants, to greenhouse gas emissions, to zero emissions vehicles and alternative fuels.

John's last day is August 31, 2014, although he will continue to do some part-time consulting for an additional six months to help with the transition.

I am pleased to announce that Julia Rege, our Senior Manager, Environment & Energy, will be taking over as Director, effective September 1. Julia has a Masters in Environmental Engineering from the University of Michigan and a B.A. in Environmental Science from Northwestern University. Prior to joining Global Automakers in 2011, she served as senior regulatory engineer at the Hyundai America Technical Center, Inc., focusing on energy and environmental regulatory issues. Before HATCI, Julia also worked at the U.S. Environmental Protection Agency's Office of Transportation and Air Quality as an environmental engineer. We will start the search for a new manager to fill Julia's current position immediately.

We plan to have a reception to thank John for all of his service both to Global Automakers and the industry in the near future.

John T. Bozzella

President & CEO

Association of Global Automakers, Inc.

1050 K Street, NW, Suite 650

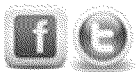
Washington, D.C. 20001

D: 202-650-5566

M: 202-650-5555

jbozzella@globalautomakers.org

GlobalAutomakers



To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Mon 7/21/2014 11:11:07 PM
Subject: 2015 FE Guide attached
VW_Group_2015 FEGuide-all rel dates-no-sales-7-21-2014.xlsx

Richard,

Here is the FE Guide as of approx 10AM this morning---just as the macro ran---I didn't have time to clean up the data and check for errors.

It looks OK to me.

Dave

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ
		2015 Volkswage	Audi	A3	VGA 7	1.8
Diesel;		2015 Volkswage	Audi	A3	VGA 101	2.0
		2015 Volkswage	Audi	A3 Cabriolet	VGA 6	1.8
		2015 Volkswage	Audi	A3 Cabriolet quattro	VGA 5	2.0
		2015 Volkswage	Audi	A3 quattro	VGA 4	2.0
		2015 Volkswage	Audi	A4	VGA 46	2.0
		2015 Volkswage	Audi	A4 quattro	VGA 64	2.0
		2015 Volkswage	Audi	A4 quattro	VGA 49	2.0
		2015 Volkswage	Audi	A5 Cabriolet quattro	VGA 66	2.0
		2015 Volkswage	Audi	A5 quattro	VGA 65	2.0
		2015 Volkswage	Audi	A5 quattro	VGA 50	2.0
		2015 Volkswage	Audi	A6	VGA 47	2.0
		2015 Volkswage	Audi	A6 quattro	VGA 48	2.0
		2015 Volkswage	Audi	A6 quattro	VGA 72	3.0
Diesel;		2015 Volkswage	Audi	A6 quattro	VGA 17	3.0
		2015 Volkswage	Audi	A7 quattro	VGA 71	3.0
Diesel;		2015 Volkswage	Audi	A7 quattro	VGA 18	3.0
		2015 Volkswage	Audi	A8	VGA 40	3.0
		2015 Volkswage	Audi	A8	VGA 11	4.0
Diesel;		2015 Volkswage	Audi	A8L	VGA 15	3.0
		2015 Volkswage	Audi	A8L	VGA 41	3.0
		2015 Volkswage	Audi	A8L	VGA 10	4.0
		2015 Volkswage	Audi	A8L	VGA 14	6.3
		2015 Volkswage	Audi	allroad quattro	VGA 68	2.0
		2015 Volkswage	Audi	Q3	VGA 62	2.0
		2015 Volkswage	Audi	Q3 quattro	VGA 37	2.0
		2015 Volkswage	Audi	Q5	VGA 67	2.0
		2015 Volkswage	Audi	Q5	VGA 70	3.0
Diesel;		2015 Volkswage	Audi	Q5	VGA 16	3.0
Hybrid;		2015 Volkswage	Audi	Q5 Hybrid	VGA 63	2.0
Diesel;		2015 Volkswage	Audi	Q7	VGA 12	3.0
		2015 Volkswage	Audi	Q7	VGA 51	3.0
		2015 Volkswage	Audi	R8	VGA 27	4.2
		2015 Volkswage	Audi	R8	VGA 29	4.2
		2015 Volkswage	Audi	R8	VGA 35	5.2
		2015 Volkswage	Audi	R8	VGA 33	5.2
		2015 Volkswage	Audi	R8 Spyder	VGA 26	4.2
		2015 Volkswage	Audi	R8 Spyder	VGA 28	4.2
		2015 Volkswage	Audi	R8 Spyder	VGA 34	5.2
		2015 Volkswage	Audi	R8 Spyder	VGA 32	5.2
		2015 Volkswage	Audi	RS5	VGA 30	4.2
		2015 Volkswage	Audi	RS5 Cabriolet	VGA 31	4.2
		2015 Volkswage	Audi	RS7	VGA 21	4.0
		2015 Volkswage	Audi	S3	VGA 42	2.0

	2015	Volkswage	Audi	S4	VGA	73	3.0
	2015	Volkswage	Audi	S4	VGA	76	3.0
	2015	Volkswage	Audi	S5	VGA	74	3.0
	2015	Volkswage	Audi	S5	VGA	77	3.0
	2015	Volkswage	Audi	S5 Cabriolet	VGA	75	3.0
	2015	Volkswage	Audi	S6	VGA	20	4.0
	2015	Volkswage	Audi	S7	VGA	19	4.0
	2015	Volkswage	Audi	S8	VGA	9	4.0
	2015	Volkswage	Audi	SQ5	VGA	69	3.0
	2015	Volkswage	Audi	TT Coupe quattro	VGA	2	2.0
	2015	Volkswage	Audi	TT Roadster quattro	VGA	3	2.0
	2015	Volkswage	Bentley	Continental GT	VGA	24	4.0
	2015	Volkswage	Bentley	Continental GT	VGA	43	6.0
	2015	Volkswage	Bentley	Continental GT Conver	VGA	22	4.0
	2015	Volkswage	Bentley	Continental GT Conver	VGA	45	6.0
	2015	Volkswage	Bentley	Flying Spur	VGA	23	4.0
	2015	Volkswage	Bentley	Flying Spur	VGA	44	6.0
	2015	Volkswage	Bentley	Mulsanne	VGA	61	6.8
	2015	Volkswage	Bugatti	Veyron	VGA	60	8.0
	2015	Volkswage	Lamborghi	Aventador Coupe	VGA	52	6.5
	2015	Volkswage	Lamborghi	Aventador Roadster	VGA	53	6.5
	2015	Volkswage	Lamborghi	Huracan	VGA	25	5.2
	2015	Volkswage	Lamborghi	Veneno Roadster	VGA	54	6.5
	2015	Volkswage	Volkswage	Beetle	VGA	79	1.8
	2015	Volkswage	Volkswage	Beetle	VGA	78	1.8
	2015	Volkswage	Volkswage	Beetle	VGA	81	2.0
Diesel;	2015	Volkswage	Volkswage	Beetle	VGA	95	2.0
	2015	Volkswage	Volkswage	Beetle	VGA	83	2.0
Diesel;	2015	Volkswage	Volkswage	Beetle	VGA	91	2.0
	2015	Volkswage	Volkswage	Beetle Convertible	VGA	80	1.8
	2015	Volkswage	Volkswage	Beetle Convertible	VGA	82	2.0
Diesel;	2015	Volkswage	Volkswage	Beetle Convertible	VGA	96	2.0
	2015	Volkswage	Volkswage	Beetle Convertible	VGA	84	2.0
Diesel;	2015	Volkswage	Volkswage	Beetle Convertible	VGA	92	2.0
	2015	Volkswage	Volkswage	CC	VGA	58	2.0
	2015	Volkswage	Volkswage	CC	VGA	59	2.0
	2015	Volkswage	Volkswage	CC 4Motion	VGA	56	3.6
	2015	Volkswage	Volkswage	Eos	VGA	36	2.0
	2015	Volkswage	Volkswage	Golf	VGA	103	1.8
	2015	Volkswage	Volkswage	Golf	VGA	85	1.8
Diesel;	2015	Volkswage	Volkswage	Golf	VGA	100	2.0
Diesel;	2015	Volkswage	Volkswage	Golf	VGA	104	2.0
	2015	Volkswage	Volkswage	GTI	VGA	1	2.0
	2015	Volkswage	Volkswage	GTI	VGA	8	2.0
	2015	Volkswage	Volkswage	Jetta	VGA	98	1.8

	2015	Volkswage	Volkswage	Jetta	VGA	97	1.8
	2015	Volkswage	Volkswage	Jetta	VGA	93	2.0
Diesel;	2015	Volkswage	Volkswage	Jetta	VGA	102	2.0
	2015	Volkswage	Volkswage	Jetta	VGA	99	2.0
	2015	Volkswage	Volkswage	Jetta	VGA	86	2.0
Diesel;	2015	Volkswage	Volkswage	Jetta	VGA	105	2.0
	2015	Volkswage	Volkswage	Jetta	VGA	94	2.0
	2015	Volkswage	Volkswage	Passat	VGA	90	1.8
	2015	Volkswage	Volkswage	Passat	VGA	88	1.8
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	89	2.0
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	87	2.0
	2015	Volkswage	Volkswage	Passat	VGA	55	3.6
	2015	Volkswage	Volkswage	Tiguan	VGA	39	2.0
	2015	Volkswage	Volkswage	Tiguan 4Motion	VGA	38	2.0
Diesel;	2015	Volkswage	Volkswage	Touareg	VGA	13	3.0
	2015	Volkswage	Volkswage	Touareg	VGA	57	3.6

# Cyl	Trans as I	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad
4	Auto(AM-S	23	33	27				28.9000	46.6000
4	Auto(AM-S	31	43	36				41.0359	61.6186
4	Auto(AM-S	24	35	28				30.5000	47.0000
4	Auto(AM-S	23	32	26				29.0000	44.2000
4	Auto(AM-S	24	33	27				30.0000	44.6000
4	Auto(AV-S	24	32	27				30.3000	44.6000
4	Auto(S8)	22	31	25				27.4000	43.0000
4	Manual(M	22	32	26				27.5555	43.9180
4	Auto(S8)	20	28	23				25.1000	39.6000
4	Auto(S8)	22	31	25				27.4000	43.0000
4	Manual(M	22	32	26				27.5555	43.9180
4	Auto(AV-S	25	33	28				31.4000	46.9000
4	Auto(S8)	20	29	23				24.8000	40.5000
6	Auto(S8)	18	27	22				23.1369	38.1000
6	Auto(S8)	24	38	29				30.6987	52.4000
6	Auto(S8)	18	28	21				23.0447	37.6000
6	Auto(S8)	24	38	29				30.6987	52.4000
6	Auto(S8)	19	29	22				23.5657	39.6000
8	Auto(S8)	18	30	22				22.5929	39.4000
6	Auto(S8)	24	36	28				29.9399	51.4000
6	Auto(S8)	19	29	22				23.5657	39.6000
8	Auto(S8)	18	29	22				22.2780	39.1000
12	Auto(S8)	14	22	17				17.2000	28.6000
4	Auto(S8)	21	28	24				26.7000	39.2000
4	Auto(S6)	20	29	23				24.8499	40.0000
4	Auto(S6)	20	28	23				24.8000	38.5000
4	Auto(S8)	20	28	23				24.8000	38.6000
6	Auto(S8)	18	26	21				22.8446	35.5000
6	Auto(S8)	24	31	27				29.1832	43.5000
4	Auto(S8)	24	30	26				30.4000	39.9000
6	Auto(S8)	19	28	22				22.8000	39.1000
6	Auto(S8)	16	22	18				19.4000	30.0000
8	Auto(AM-S	14	23	17				16.4549	29.7195
8	Manual(M	11	20	14				13.6544	24.3877
10	Auto(AM-S	13	22	16				15.4000	28.8067
10	Manual(M	12	19	14				13.7000	23.4475
8	Auto(AM-S	14	23	17				16.4549	29.7195
8	Manual(M	11	20	14				13.6544	24.3877
10	Auto(AM-S	13	22	16				15.4000	28.8067
10	Manual(M	12	19	14				13.7000	23.4475
8	Auto(AM-S	16	23	18				19.1000	30.0000
8	Auto(AM-S	16	22	18				19.2000	28.9000
8	Auto(S8)	16	27	19				19.1000	35.3000
4	Auto(AM-S	23	31	26				28.5000	41.5000

6 Auto(AM-S	18	28	21	22.4000	35.8000
6 Manual(M	17	26	20	20.0000	33.4000
6 Auto(AM-S	18	28	21	22.4000	35.8000
6 Manual(M	17	26	20	20.0000	33.4000
6 Auto(AM-S	18	26	21	22.1000	34.7000
8 Auto(AM-S	17	27	20	20.7366	35.2072
8 Auto(AM-S	17	27	20	20.7366	35.2072
8 Auto(S8)	17	27	20	19.9000	36.4000
6 Auto(S8)	17	24	19	20.8000	32.9000
4 Auto(AM-S	22	31	26	28.3669	42.1911
4 Auto(AM-S	22	31	26	28.3669	42.1911
8 Auto(S8)	15	25	19	19.1000	33.5000
12 Auto(S8)	12	21	15	15.4000	28.3000
8 Auto(S8)	14	24	17	17.3000	31.8000
12 Auto(S8)	12	20	15	14.4000	26.7000
8 Auto(S8)	14	24	17	17.3000	31.8000
12 Auto(S8)	12	20	15	14.4000	26.7000
8 Auto(S8)	11	18	13	12.9000	21.8000
16 Auto(AM-S	8	15	10	10.0000	17.9000
12 Auto(AM-S	11	18	13	12.6000	25.2000
12 Auto(AM-S	10	16	12	11.5000	21.2000
10 Auto(AM-S	14	20	16	16.8000	25.5000
12 Auto(AM-S	11	17	13	12.5000	22.7000
4 Auto(S6)	25	33	28	31.8064	46.0926
4 Manual(M	24	33	27	30.3689	46.0618
4 Auto(AM-S	24	30	26	29.1689	42.3558
4 Auto(AM-S	31	41	34	40.2000	57.8000
4 Manual(M	23	31	26	27.7589	43.4112
4 Manual(M	31	41	34	40.0000	57.8000
4 Auto(S6)	24	32	27	30.6903	45.4713
4 Auto(AM-S	23	29	25	28.8902	40.8000
4 Auto(AM-S	30	40	34	39.7000	56.5000
4 Manual(M	23	31	26	27.7589	43.4112
4 Manual(M	30	40	34	38.7000	57.2000
4 Auto(AM-S	22	31	25	26.9290	42.1849
4 Manual(M	21	32	25	25.6435	43.4548
6 Auto(S6)	17	25	20	20.5000	33.5000
4 Auto(AM-S	22	30	25	27.5000	41.5000
4 Auto(S6)	25	36	29	32.5000	51.1000
4 Manual(M	25	37	30	32.6000	52.5000
4 Auto(AM-S	31	43	36	41.0359	61.6186
4 Manual(M	31	45	36	40.4000	65.2000
4 Auto(AM-S	25	33	28	30.7000	45.3000
4 Manual(M	25	34	28	30.0000	46.4000
4 Auto(S6)	25	37	30	32.7401	52.6000

4 Manual(M	25	37	29	32.3787	52.4790
4 Auto(AM-S	24	32	27	29.5595	44.4600
4 Auto(AM-S	31	45	36	41.3000	64.1000
4 Auto(S6)	23	34	26	28.7000	47.5000
4 Manual(M	25	34	28	29.3000	49.6000
4 Manual(M	31	46	36	40.2000	65.6000
4 Manual(M	23	33	26	28.2801	45.1600
4 Auto(S6)	24	36	28	31.2000	50.5769
4 Manual(M	24	35	28	30.9734	49.8831
4 Auto(AM-S	30	42	34	38.7000	59.8000
4 Manual(M	30	44	35	39.0000	62.4000
6 Auto(AM-S	20	28	23	23.9000	37.3000
4 Auto(S6)	21	26	23	25.9873	36.0386
4 Auto(S6)	20	26	23	25.7711	36.0238
6 Auto(S8)	20	29	23	24.1000	41.0000
6 Auto(S8)	17	23	19	21.3000	31.6000

Comb Unr	City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Oth
34.8580	23.4556	33.3421	27.0673		TC	Turbochar¡	AMS	Automatec	
48.2955	31.1996	43.0359	35.6064		TC	Turbochar¡	AMS	Automatec	
36.2224	24.3444	34.5845	28.0867		TC	Turbochar¡	AMS	Automatec	
34.3094	23.3120	31.5429	26.4136		TC	Turbochar¡	AMS	Automatec	
35.1828	24.0818	32.6198	27.2970		TC	Turbochar¡	AMS	Automatec	
35.4089	23.6858	31.6788	26.7189		TC	Turbochar¡	SCV	Selectable	
32.7460	21.5783	30.5883	24.8755		TC	Turbochar¡	SA	Semi-Auto	
33.1059	22.1972	32.0693	25.7665		TC	Turbochar¡	M	Manual	
30.0517	19.8843	28.2637	22.9455		TC	Turbochar¡	SA	Semi-Auto	
32.7460	21.5783	30.5883	24.8755		TC	Turbochar¡	SA	Semi-Auto	
33.1059	22.1972	32.0693	25.7665		TC	Turbochar¡	M	Manual	
36.8857	24.5044	32.5529	27.5721		TC	Turbochar¡	SCV	Selectable	
30.0404	19.6106	28.8603	22.9156		TC	Turbochar¡	SA	Semi-Auto	
28.1037	18.3949	27.2332	21.5408		SC	Supercha¦	SA	Semi-Auto	
37.7304	24.4094	38.0485	29.1042		TC	Turbochar¡	SA	Semi-Auto	
27.9059	18.0028	27.5267	21.3226		SC	Supercha¦	SA	Semi-Auto	
37.7304	24.4094	38.0485	29.1042		TC	Turbochar¡	SA	Semi-Auto	
28.8162	18.6853	29.3211	22.3303		SC	Supercha¦	SA	Semi-Auto	
27.9601	18.2315	29.5343	22.0244		TC	Turbochar¡	SA	Semi-Auto	
36.8664	23.8727	36.3252	28.2271		TC	Turbochar¡	SA	Semi-Auto	
28.8162	18.6853	29.3211	22.3303		SC	Supercha¦	SA	Semi-Auto	
27.6266	17.9485	28.5015	21.5369		TC	Turbochar¡	SA	Semi-Auto	
20.9595	13.8358	21.9706	16.6020	G	NA	Naturally A	SA	Semi-Auto	
31.1732	21.0646	27.9892	23.7037		TC	Turbochar¡	SA	Semi-Auto	
29.9555	19.6619	28.5380	22.8617		TC	Turbochar¡	SA	Semi-Auto	
29.5284	19.7028	28.0105	22.7375		TC	Turbochar¡	SA	Semi-Auto	
29.5548	19.6619	27.5771	22.5781		TC	Turbochar¡	SA	Semi-Auto	
27.2096	17.8443	25.5746	20.6536		SC	Supercha¦	SA	Semi-Auto	
34.2568	23.6266	31.3636	26.5783		TC	Turbochar¡	SA	Semi-Auto	
34.0480	24.0075	29.7936	26.3065		TC	Turbochar¡	SA	Semi-Auto	
28.0649	18.7400	27.6200	21.9099		TC	Turbochar¡	SA	Semi-Auto	
23.0678	15.5983	21.6157	17.8322		SC	Supercha¦	SA	Semi-Auto	
20.5904	13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec	
17.0265	11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual	
19.4796	12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec	
16.8527	11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual	
20.5904	13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec	
17.0265	11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual	
19.4796	12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec	
16.8527	11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual	
22.8332	15.7409	23.3075	18.4339		NA	Naturally A	AMS	Automatec	
22.6159	15.8793	22.1836	18.2078		NA	Naturally A	AMS	Automatec	
24.0710	15.5443	26.5587	19.1108		TC	Turbochar¡	SA	Semi-Auto	
33.1767	23.1833	30.7065	26.0560		TC	Turbochar¡	AMS	Automatec	

26.9372	18.1170	27.5580	21.4190	SC	Supercharg AMS	Automatec
24.4063	17.0438	26.0230	20.1767	SC	Supercharg M	Manual
26.9372	18.1170	27.5580	21.4190	SC	Supercharg AMS	Automatec
24.4063	17.0438	26.0230	20.1767	SC	Supercharg M	Manual
26.4165	17.6699	25.9530	20.6333	SC	Supercharg AMS	Automatec
25.4423	16.7533	26.9042	20.1794	TC	Turbochar AMS	Automatec
25.4423	16.7533	26.9042	20.1794	TC	Turbochar AMS	Automatec
24.9995	16.5369	26.7008	19.9551	TC	Turbochar SA	Semi-Auto
24.9252	16.7285	23.6581	19.2682	SC	Supercharg SA	Semi-Auto
33.2728	22.3665	31.1759	25.6242	TC	Turbochar AMS	Automatec
33.2728	22.3665	31.1759	25.6242	TC	Turbochar AMS	Automatec
23.6806	15.2087	25.3816	18.5553	TC	Turbochar SA	Semi-Auto
19.3741	12.4737	21.0866	15.2827G	TC	Turbochar SA	Semi-Auto
21.7662	13.8190	23.8488	17.0447G	TC	Turbochar SA	Semi-Auto
18.1658	12.0228	20.0478	14.6643G	TC	Turbochar SA	Semi-Auto
21.7662	13.8190	23.8488	17.0447G	TC	Turbochar SA	Semi-Auto
18.1658	12.0228	20.0478	14.6643G	TC	Turbochar SA	Semi-Auto
15.8033	10.5402	17.7129	12.8889G	TC	Turbochar SA	Semi-Auto
12.4782	8.4232	14.7698	10.4424G	TC	Turbochar AMS	Automatec
16.2581	10.6055	18.4729	13.1199G	NA	Naturally A AMS	Automatec
14.4817	9.7957	16.2453	11.9264G	NA	Naturally A AMS	Automatec
19.8471	14.0224	20.0427	16.2140G	NA	Naturally A AMS	Automatec
15.6681	10.6353	16.9743	12.7836G	NA	Naturally A AMS	Automated
36.9616	24.7637	32.6943	27.7980	TC	Turbochar SA	Semi-Auto
35.8679	23.7579	32.6943	27.0899	TC	Turbochar M	Manual
33.9213	23.6856	29.5929	26.0232	TC	Turbochar AMS	Automatec
46.5830	30.6516	40.5292	34.4273	TC	Turbochar AMS	Automatec
33.1352	22.6980	30.6082	25.6850	TC	Turbochar M	Manual
46.4350	30.5143	40.5292	34.3319	TC	Turbochar M	Manual
35.9488	23.9740	32.2876	27.1159	TC	Turbochar SA	Semi-Auto
33.2591	22.7135	28.5529	25.0157	TC	Turbochar AMS	Automatec
45.8327	30.3081	39.6674	33.9083	TC	Turbochar AMS	Automatec
33.1352	22.6980	30.6082	25.6850	TC	Turbochar M	Manual
45.2919	29.6183	40.1317	33.5766	TC	Turbochar M	Manual
32.1632	21.8993	30.8310	25.1821	TC	Turbochar AMS	Automatec
31.4431	20.6665	31.8238	24.5378	TC	Turbochar M	Manual
24.8373	16.9415	25.2190	19.8774	NA	Naturally A SA	Semi-Auto
32.4219	21.7634	30.1121	24.8658	TC	Turbochar AMS	Automatec
38.8661	25.2640	36.0643	29.1989	TC	Turbochar SA	Semi-Auto
39.3042	25.3353	37.0021	29.5244	TC	Turbochar M	Manual
48.2955	31.1996	43.0359	35.6064	TC	Turbochar AMS	Automatec
48.7432	30.7888	45.3939	36.0012	TC	Turbochar M	Manual
35.9078	24.6434	32.6158	27.6891	TC	Turbochar AMS	Automatec
35.6740	24.9095	34.2917	28.4070	TC	Turbochar M	Manual
39.4414	25.4066	37.0689	29.5967	TC	Turbochar SA	Semi-Auto

39.1216	25.1926	37.0021	29.4176	TC	Turbochar¡M	Manual
34.8093	23.5744	31.8670	26.7012	TC	Turbochar¡AMS	Automatec
49.1703	31.4045	44.6752	36.2501	TC	Turbochar¡AMS	Automatec
34.9193	22.5269	33.6412	26.4608	NA	Naturally ASA	Semi-Auto
35.9145	24.6629	33.9684	28.1307	NA	Naturally AM	Manual
48.6823	30.6516	45.6549	35.9711	TC	Turbochar¡M	Manual
33.9987	22.8950	32.6159	26.4413	TC	Turbochar¡M	Manual
37.6995	24.3335	35.7288	28.4112	TC	Turbochar¡SA	Semi-Auto
37.3437	24.1899	35.2585	28.1693	TC	Turbochar¡M	Manual
46.0046	29.6183	41.8508	34.1040	TC	Turbochar¡AMS	Automatec
46.9173	29.8256	43.5614	34.7575	TC	Turbochar¡M	Manual
28.5088	19.7174	27.8048	22.6868	NA	Naturally AAMS	Automatec
29.7169	20.5496	25.7855	22.6161	TC	Turbochar¡SA	Semi-Auto
29.5565	20.3807	25.8019	22.5089	TC	Turbochar¡SA	Semi-Auto
29.5883	19.6490	28.9961	22.9829	TC	Turbochar¡SA	Semi-Auto
24.9612	17.0411	22.7325	19.2048	NA	Naturally ASA	Semi-Auto

# Gears	Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag
ble (e.g. Automated Manual with	6Y	N	F paddles)	2-Wheel D	FVGAV02.(	15			GP
ble (e.g. Automated Manual with	6Y	N	F paddles)	2-Wheel D	FVGAV02.0VAL		20		DU
ble (e.g. Automated Manual with	6Y	N	F paddles)	2-Wheel D	FVGAV02.(	15			GP
ble (e.g. Automated Manual with	6Y	N	A paddles)	All Wheel I	FVGAV02.(	15			GP
ble (e.g. Automated Manual with	6Y	N	A paddles)	All Wheel I	FVGAV02.(	15			GP
able (e.g. CVT with paddles)	8N	N	F	2-Wheel D	FVGAV02.(	15			GP
	8Y	N	A	All Wheel I	FVGAJ02.0	85		422	GP
	6N	N	A	All Wheel I	FVGAV02.(	15			GP
	8Y	N	A	All Wheel I	FVGAJ02.0	85		389	GP
	8Y	N	A	All Wheel I	FVGAJ02.0	85		422	GP
	6N	N	A	All Wheel I	FVGAV02.(	15			GP
able (e.g. CVT with paddles)	8N	N	F	2-Wheel D	FVGAV02.(	15			GP
	8Y	N	A	All Wheel I	FVGAV02.(	15			GP
	8Y	N	A	All Wheel I	FVGAJ03.0	15			GP
	8Y	N	A	All Wheel I	FVGAJ03.0NU4		5		DU
	8Y	N	A	All Wheel I	FVGAJ03.0	15			GP
	8Y	N	A	All Wheel I	FVGAJ03.0NU4		5		DU
	8Y	N	A	All Wheel I	FVGAV03.(	15			GP
	8Y	N	A	All Wheel I	FVGAV04.(	15			GP
	8Y	N	A	All Wheel I	FVGAJ03.0NU4		5		DU
	8Y	N	A	All Wheel I	FVGAV03.(	15			GP
	8Y	N	A	All Wheel I	FVGAV04.(	15			GP
	8Y	N	A	All Wheel I	FVGAV06.3	15			GP
	8Y	N	A	All Wheel I	FVGAJ02.0	85		406	GP
	6Y	N	F	2-Wheel D	FVGAV02.(	15			GP
	6Y	N	A	All Wheel I	FVGAV02.(	15			GP
	8Y	N	A	All Wheel I	FVGAJ02.0	85		455	GP
	8Y	N	A	All Wheel I	FVGAJ03.0	15			GP
	8Y	N	A	All Wheel I	FVGAJ03.0NU4		5		DU
	8Y	N	A	All Wheel I	FVGAT02.(	15			GP
	8Y	N	A	All Wheel I	FVGAT03.0NU3		5		DU
	8Y	N	A	All Wheel I	FVGAT03.(	15			GP
ble (e.g. Automated Manual with	7Y	N	A paddles)	All Wheel I	FVGAV04.2	15			GP
	6N	N	A	All Wheel I	FVGAV04.2	15			GP
ble (e.g. Automated Manual with	7Y	N	A paddles)	All Wheel I	FVGAV05.2	15			GP
	6N	N	A	All Wheel I	FVGAV05.2	15			GP
ble (e.g. Automated Manual with	7Y	N	A paddles)	All Wheel I	FVGAV04.2	15			GP
	6N	N	A	All Wheel I	FVGAV04.2	15			GP
ble (e.g. Automated Manual with	7Y	N	A paddles)	All Wheel I	FVGAV05.2	15			GP
	6N	N	A	All Wheel I	FVGAV05.2	15			GP
ble (e.g. Automated Manual with	7Y	N	A paddles)	All Wheel I	FVGAV04.2	15			GP
ble (e.g. Automated Manual with	7Y	N	A paddles)	All Wheel I	FVGAV04.2	15			GP
	8Y	N	A	All Wheel I	FVGAV04.(	15			GP
ble (e.g. Automated Manual with	6Y	N	A paddles)	All Wheel I	FVGAV02.(	15			GP

ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAJ03.0	15		GP
	6 N	N	A	All Wheel IFVGAJ03.0	15		GP
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAJ03.0	15		GP
	6 N	N	A	All Wheel IFVGAJ03.0	15		GP
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAJ03.0	15		GP
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV04.(	15		GP
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV04.(	15		GP
	8 Y	N	A	All Wheel IFVGAV04.(	15		GP
	8 Y	N	A	All Wheel IFVGAJ03.0	15		GP
ble (e.g. Automated Manual with paddles)	6 Y	N	A	All Wheel IFVGAV02.(	15		GP
ble (e.g. Automated Manual with paddles)	6 Y	N	A	All Wheel IFVGAV02.(	15		GP
	8 Y	N	A	All Wheel IFVGAV04.(	15		GP
	8 Y	N	A	All Wheel IFVGAV06.(	85	357	GP
	8 Y	N	A	All Wheel IFVGAV04.(	15		GP
	8 Y	N	A	All Wheel IFVGAV06.(	85	357	GP
	8 Y	N	A	All Wheel IFVGAV04.(	15		GP
	8 Y	N	A	All Wheel IFVGAV06.(	85	357	GP
	8 Y	N	R	2-Wheel DFVGAV06.8	15		GP
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV08.(	15		GPR
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV06.5	15		GPR
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV06.5	15		GPR
ble (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV05.2	15		GP
le (e.g. Automated Manual with paddles)	7 Y	N	A	All Wheel IFVGAV06.	15		GPR
	6 Y	N	F	2-Wheel DFVGAV02.(	15		G
	5 N	N	F	2-Wheel DFVGAV02.(	15		G
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.(	15		GP
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.0VAL		20	DU
	6 N	N	F	2-Wheel DFVGAV02.(	15		GP
	6 N	N	F	2-Wheel DFVGAV02.0VAL		20	DU
	6 Y	N	F	2-Wheel DFVGAV02.(	15		G
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.(	15		GP
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.0VAL		20	DU
	6 N	N	F	2-Wheel DFVGAV02.(	15		GP
	6 N	N	F	2-Wheel DFVGAV02.0VAL		20	DU
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAJ02.0	15		GP
	6 N	N	F	2-Wheel DFVGAJ02.0	15		GP
	6 Y	N	A	All Wheel IFVGAV03.(	15		GP
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.(	15		GP
	6 Y	N	F	2-Wheel DFVGAV02.(	15		G
	5 N	N	F	2-Wheel DFVGAV02.(	15		G
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.0VAL		20	DU
	6 N	N	F	2-Wheel DFVGAV02.0VAL		20	DU
ble (e.g. Automated Manual with paddles)	6 Y	N	F	2-Wheel DFVGAV02.(	15		GP
	6 N	N	F	2-Wheel DFVGAV02.(	15		GP
	6 Y	N	F	2-Wheel DFVGAV02.(	15		G

5	N	N	F	2-Wheel D	FVGAV02.(	10	G
ble (e.g. Automated Manual with paddles)							
6	Y	N	F	2-Wheel D	FVGAV02.(	15	GP
ble (e.g. Automated Manual with paddles)							
6	Y	N	F	2-Wheel D	FVGAV02.0VAL	20	DU
6	Y	N	F	2-Wheel D	FVGAV02.(	15	G
5	N	N	F	2-Wheel D	FVGAV02.(	15	G
6	N	N	F	2-Wheel D	FVGAV02.0VAL	20	DU
6	N	N	F	2-Wheel D	FVGAV02.(	15	GP
6	Y	N	F	2-Wheel D	FVGAV02.(	15	G
5	N	N	F	2-Wheel D	FVGAV02.(	15	G
ble (e.g. Automated Manual with paddles)							
6	Y	N	F	2-Wheel D	FVGAV02.0VAL	20	DU
6	N	N	F	2-Wheel D	FVGAV02.0VAL	20	DU
ble (e.g. Automated Manual with paddles)							
6	Y	N	F	2-Wheel D	FVGAV03.(	15	GP
6	Y	N	F	2-Wheel D	FVGAJ02.0	10	GP
6	Y	N	A	All Wheel I	FVGAJ02.0	15	GP
8	Y	N	A	All Wheel I	FVGAT03.0NU2	5	DU
8	Y	N	A	All Wheel I	FVGAT03.(	15	GP

Fuel Type	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa
Gasoline (FMPG	miles per gN	Not exempt			86	12		
Diesel, ultrMPG	miles per gN	Not exempt			86	12		
Gasoline (FMPG	miles per gN	Not exemp	79	10				
Gasoline (FMPG	miles per gN	Not exemp	79	10				
Gasoline (FMPG	miles per gN	Not exempt			86	10		
Gasoline (FMPG	miles per gN	Not exempt			91	12		
Gasoline (FMPG	miles per gN	Not exempt			91	12		
Gasoline (FMPG	miles per gN	Not exempt			91	12		
Gasoline (FMPG	miles per gN	Not exemp	81	10				
Gasoline (FMPG	miles per gN	Not exemp	84	12				
Gasoline (FMPG	miles per gN	Not exemp	84	12				
Gasoline (FMPG	miles per gN	Not exempt			98	16		
Gasoline (FMPG	miles per gN	Not exempt			98	16		
Gasoline (FMPG	miles per gN	Not exempt			98	16		
Diesel, ultrMPG	miles per gN	Not exempt			98	16		
Gasoline (FMPG	miles per gN	Not exempt						94
Diesel, ultrMPG	miles per gN	Not exempt						94
Gasoline (FMPG	miles per gN	Not exempt			100	15		
Gasoline (FMPG	miles per gN	Not exempt			100	15		
Diesel, ultrMPG	miles per gN	Not exempt			107	15		
Gasoline (FMPG	miles per gN	Not exempt			107	15		
Gasoline (FMPG	miles per gN	Not exempt			107	15		
Gasoline (FMPG	miles per gN	Not exempt			107	15		
Gasoline (FMPG	miles per gN	Not exempt			90	28		
Gasoline (FMPG	miles per gN	Not exempt						84
Gasoline (FMPG	miles per gN	Not exempt						84
Gasoline (FMPG	miles per gT	Truck						
Gasoline (FMPG	miles per gT	Truck						
Diesel, ultrMPG	miles per gT	Truck						
Gasoline (FMPG	miles per gT	Truck						
Diesel, ultrMPG	miles per gT	Truck						
Gasoline (FMPG	miles per gT	Truck						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exempt						
Gasoline (FMPG	miles per gN	Not exemp	84	13				
Gasoline (FMPG	miles per gN	Not exemp	81	10				
Gasoline (FMPG	miles per gN	Not exempt						94
Gasoline (FMPG	miles per gN	Not exempt			86	10		

Gasoline (FMPG	miles per gN	Not exempt			90	13	
Gasoline (FMPG	miles per gN	Not exempt			90	13	
Gasoline (FMPG	miles per gN	Not exemp	84	13			
Gasoline (FMPG	miles per gN	Not exemp	84	13			
Gasoline (FMPG	miles per gN	Not exemp	81	10			
Gasoline (FMPG	miles per gN	Not exempt			98	16	
Gasoline (FMPG	miles per gN	Not exempt					94
Gasoline (FMPG	miles per gN	Not exempt			100	15	
Gasoline (FMPG	miles per gT	Truck					
Gasoline (FMPG	miles per gN	Not exemp	74	13			
Gasoline (FMPG	miles per gN	Not exempt					
Gasoline (FMPG	miles per gN	Not exemp	89	11			
Gasoline (FMPG	miles per gN	Not exemp	89	11			
Gasoline (FMPG	miles per gN	Not exemp	86	7			
Gasoline (FMPG	miles per gN	Not exemp	86	7			
Gasoline (FMPG	miles per gN	Not exemp	102	13			
Gasoline (FMPG	miles per gN	Not exemp	102	13			
Gasoline (FMPG	miles per gN	Not exempt			101	11	
Gasoline (FMPG	miles per gN	Not exempt					
Gasoline (FMPG	miles per gN	Not exempt					
Gasoline (FMPG	miles per gN	Not exempt					
Gasoline (FMPG	miles per gN	Not exempt					
Gasoline (IMPG	miles per gN	Not exempt					
Gasoline (FMPG	miles per gN	Not exempt					85
Gasoline (FMPG	miles per gN	Not exempt					85
Gasoline (FMPG	miles per gN	Not exempt					85
Diesel, ultrMPG	miles per gN	Not exempt					85
Gasoline (FMPG	miles per gN	Not exempt					85
Diesel, ultrMPG	miles per gN	Not exempt					85
Gasoline (FMPG	miles per gN	Not exemp	81	7			
Gasoline (FMPG	miles per gN	Not exemp	81	7			
Diesel, ultrMPG	miles per gN	Not exemp	81	7			
Gasoline (FMPG	miles per gN	Not exemp	81	7			
Diesel, ultrMPG	miles per gN	Not exemp	81	7			
Gasoline (FMPG	miles per gN	Not exemp	94	13			
Gasoline (FMPG	miles per gN	Not exemp	94	13			
Gasoline (FMPG	miles per gN	Not exemp	94	13			
Gasoline (FMPG	miles per gN	Not exemp	77	11			
Gasoline (FMPG	miles per gN	Not exempt					93
Gasoline (FMPG	miles per gN	Not exempt					93
Diesel, ultrMPG	miles per gN	Not exempt					93
Diesel, ultrMPG	miles per gN	Not exempt					93
Gasoline (FMPG	miles per gN	Not exempt					93
Gasoline (FMPG	miles per gN	Not exempt					93
Gasoline (FMPG	miles per gN	Not exempt			94	16	

Gasoline (FMPG	miles per gN	Not exempt	94	16
Gasoline (FMPG	miles per gN	Not exempt	94	16
Diesel, ultrMPG	miles per gN	Not exempt	94	16
Gasoline (FMPG	miles per gN	Not exempt	94	16
Gasoline (FMPG	miles per gN	Not exempt	94	16
Diesel, ultrMPG	miles per gN	Not exempt	94	16
Gasoline (FMPG	miles per gN	Not exempt	94	16
Gasoline (FMPG	miles per gN	Not exempt	102	16
Gasoline (FMPG	miles per gN	Not exempt	102	16
Diesel, ultrMPG	miles per gN	Not exempt	102	16
Diesel, ultrMPG	miles per gN	Not exempt	102	16
Gasoline (FMPG	miles per gN	Not exempt	102	16
Gasoline (FMPG	miles per gT	Truck		
Gasoline (FMPG	miles per gT	Truck		
Diesel, ultrMPG	miles per gT	Truck		
Gasoline (FMPG	miles per gT	Truck		

ion) Hatchbk Lu	Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor
	2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engi						
	1550	1550	hwy label value correction						
	2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine c						
	2200	2200	refreshed release date, interior volume corrected, engine configuration changed to						
	2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration num						
	2100	2100							
	2300	2300	eng code c	15	22	18			
	2200	2200							
	2500	2500	eng code c	14	20	16			
	2300	2300	eng code c	15	22	18			
	2200	2200							
	2050	2050							
	2500	2500							
	2600	2600							
	1950	1950							
25	2700	2700							
25	1950	1950							
	2600	2600							
	2600	2600							
	2000	2000							
	2600	2600							
	2600	2600	FUEL AND GHG RATING CORRECTED TO 5						
	3350	3350							
	2400	2400	manuf con	15	21	17			
17	2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 va						
17	2500	2500	Eng division correction						
	2500	2500		14	19	16			
	2700	2700							
	2100	2100	Corrected unrounded unadjusted highway and combined CO2 values						
	2200	2200	corrected stop/start indicator						
	2550	2550							
	3150	3150	corrected highway CO2 adj value						
	3350	3350							
	4050	4050							
	3550	3550							
	4050	4050							
	3350	3350							
	4050	4050							
	3550	3550							
	4050	4050							
	3150	3150							
	3150	3150							
25	3000	3000	highway & combined values corrected, maximum ethanol corrected						
	2200	2200							

	2700	2700				
	2850	2850				
	2700	2700				
	2850	2850				
	2700	2700				
	2850	2850	maximum ethanol corrected			
25	2850	2850	maximum ethanol corrected			
	2850	2850	S/S indicator to yes, back to NO.			
	3000	3000				
	2200	2200	changed engine configuration number after Verify reassigned numbers on CSI afte			
	2200	2200	changed engine configuration number after Verify reassigned numbers on CSI afte			
	3000	3000	release date change to March			
	3800	3800		9	15	11
	3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
	3800	3800		9	15	11
	3350	3350	release date change to March			
	3800	3800		9	15	11
	4400	4400				
	5700	5700	eng code correction			
	4400	4400				
	4750	4750				
	3550	3550	Release date change			
	4400	4400	corrected carline to Veneno Roadster 477			
15	1900	1900				
15	1950	1950	corrected combined unrounded unadj value			
15	2200	2200	corrected combined unadjusted unrounded value type			
15	1650	1650				
15	2200	2200				
15	1650	1650	corrected max Bio-Diesel to 20			
	1950	1950				
	2300	2300				
	1650	1650				
	2200	2200				
	1650	1650				
	2300	2300				
	2300	2300				
	2850	2850				
	2300	2300				
16	1800	1800				
16	1750	1750				
16	1550	1550	hwy label value corrected			
16	1550	1550				
16	2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
16	2050	2050				
	1750	1750				

1800	1800 fuel consumption and CO2 unadj unrounded corrected
2100	2100
1550	1550 release date change
2000	2000
1900	1900
1550	1550
2200	2200
1900	1900 rounded adjusted highway CO2 rounding error corrected
1900	1900
1650	1650 EPA confirmatory tests numbers for city highway US06 now included, no label valu
1600	1600 corrected CO2 values and annual fuel cost corrected
2500	2500
2500	2500
2500	2500
2450	2450 corrected fuel economy rating to 5
3000	3000

City2	Hwy2	Comb2	City2 U	Hwy2 Unr	Comb2 Unr	Range2	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit

ne code CNSB.

onfiguration changed to #1 for 1.8L engine code CNSB
#2 for 2.0L engine code CNTC.
ber changed to #2 for 2.0L engine code CNTC, GHG rating corrected

19.5	30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8MPG
17.4	28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E8MPG
19.5	30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8MPG
19.2	28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E8MPG
lue								
17.4	27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E8MPG

r addition of a model running change, this label includes two engine configuration numbers: #2 for engine code CET
r addition of a model running change, this label includes two engine configuration numbers: #2 for engine code CET

10.5	20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E‡MPG
10.5	20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E‡MPG
10.5	20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E‡MPG

e changes

Fuel2 Unit	Fuel2 Ann	City CO2 I	Hwy CO2	Comb CO2	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl
						SIDI;	2	23	
							2	23	
						SIDI;	2	23	
						SIDI;	2	23	
						SIDI;	2	23	
						SIDI;	2	24	
miles per g	2600	400	281	347	2600	SIDI; FFV;	2	24	
						SIDI;	2	24	
miles per g	2900	448	308	385	2900	SIDI; FFV;	2	23	
miles per g	2600	400	281	347	2600	SIDI; FFV;	2	23	
						SIDI;	2	23	
						SIDI;	2	25	
						SIDI;	2	25	
						SIDI;	2	25	
							2	25	
						SIDI;	2	25	
							2	25	
						SIDI;	2	25	
						SIDI;	2	25	
							2	26	
						SIDI;	2	26	
						SIDI;	2	26	
						SIDI;	2	26	
miles per g	2750	406	300	358	2750	SIDI; FFV;	2	27	
						SIDI;	2	24	
						SIDI;	2	24	
miles per g	2900	450	320	392	2900	SIDI; FFV;	2	231	
						SIDI;	2	231	
							2	231	
						SIDI;	2	231	
							2	233	
						SIDI;	2	233	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	21	
						SIDI;	2	23	
						SIDI;	2	23	
						SIDI;	2	25	
						SIDI;	2	23	

					SIDI;	2	24
					SIDI;	2	24
					SIDI;	2	23
					SIDI;	2	23
					SIDI;	2	23
					SIDI;	2	25
					SIDI;	2	25
					SIDI;	2	25
					SIDI;	2	231
A and # 4 for engine code CDMA and all TT models.					SIDI;	2	23
A and # 4 for engine code CDMA and all TT models.					SIDI;	2	21
					SIDI;	2	24
miles per g	4250	711	410	576	4250	FFV;	2	24
						SIDI;	2	23
miles per g	4250	726	421	589	4250	FFV;	2	23
						SIDI;	2	25
miles per g	4250	726	421	589	4250	FFV;	2	25
							1	15
							2	21
							2	21
							2	21
						SIDI & PFI;	2	21
							2	21
						SIDI;	2	24
						SIDI;	2	24
						SIDI;	2	24
							2	24
						SIDI;	2	24
							2	24
						SIDI;	2	23
						SIDI;	2	23
							2	23
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	1	14
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	2	24
SIDI;	2	24
SIDI;	2	25
SIDI;	2	25
	2	25
	2	25
SIDI;	2	25
SIDI;	2	230
SIDI;	2	231
	2	233
SIDI;	2	233

Carline Cl	Car/Truck	Calc Appr	Sales Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel
Subcompa	car	Vehicle Specific 5-cycle	2/25/2014	16011	[redacted]	N	N	
Subcompa	car	Derived 5-cycle label	7/28/2014	16483		N	N	
Subcompa	car	Vehicle Specific 5-cycle	6/2/2014	16013		N	N	
Subcompa	car	Vehicle Specific 5-cycle	6/2/2014	16012		N	N	
Subcompa	car	Vehicle Specific 5-cycle	1/15/2014	16197		N	N	
Compact C	car	Derived 5-cycle label	6/9/2014	15670		N	N	
Compact C	car	Derived 5-cycle label	6/9/2014	16311		N	N	
Compact C	car	Vehicle Specific 5-cycle	6/9/2014	15675		N	N	
Subcompa	car	Derived 5-cycle label	6/9/2014	16313		N	N	
Subcompa	car	Derived 5-cycle label	6/9/2014	16312		N	N	
Subcompa	car	Vehicle Specific 5-cycle	6/9/2014	15676		N	N	
Midsize C	car	Vehicle Specific 5-cycle	6/9/2014	15673		N	N	
Midsize C	car	Vehicle Specific 5-cycle	6/9/2014	15674		N	N	
Midsize C	car	Derived 5-cycle label	6/9/2014	16062		N	N	
Midsize C	car	Vehicle Specific 5-cycle	6/10/2014	15458		N	N	
Midsize C	car	Vehicle Specific 5-cycle	6/9/2014	16061		N	N	
Midsize C	car	Vehicle Specific 5-cycle	6/10/2014	15459		N	N	
Midsize C	car	Vehicle Specific 5-cycle	5/15/2014	15647		N	N	
Midsize C	car	Vehicle Specific 5-cycle	5/15/2014	15385		N	N	
Large Cars	car	Vehicle Specific 5-cycle	5/15/2014	15456		N	N	
Large Cars	car	Vehicle Specific 5-cycle	5/15/2014	15648		N	N	
Large Cars	car	Vehicle Specific 5-cycle	5/15/2014	15386		N	N	
Large Cars	car	Vehicle Specific 5-cycle	5/15/2014	15442		N	N	
Small Stati	car	Derived 5-cycle label	6/9/2014	16637		N	N	
Compact C	car	Derived 5-cycle label	8/4/2014	16057		N	N	
Compact C	car	Vehicle Specific 5-cycle	8/4/2014	15650		N	N	
Small SUV 4WD		Derived 5-cycle label	6/9/2014	16034		N	N	
Small SUV 4WD		Vehicle Specific 5-cycle	6/9/2014	16060		N	N	
Small SUV 4WD		Vehicle Specific 5-cycle	6/10/2014	15460		N	N	
Small SUV 4WD		Vehicle Specific 5-cycle	6/9/2014	15999		N	N	
Standard SUV 4WD		Vehicle Specific 5-cycle	6/2/2014	15408		N	N	
Standard SUV 4WD		Derived 5-cycle label	6/9/2014	15711		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15493		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15497		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15601		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15598		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15492		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15496		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15600		N	N	
Two Seate	car	Vehicle Specific 5-cycle	6/9/2014	15597		N	N	
Subcompa	car	Vehicle Specific 5-cycle	6/9/2014	15589		N	N	
Subcompa	car	Vehicle Specific 5-cycle	6/9/2014	15590		N	N	
Midsize C	car	Vehicle Specific 5-cycle	6/2/2014	15577		N	N	
Subcompa	car	Vehicle Specific 5-cycle	8/4/2014	15651		N	N	

Compact Ccar	Vehicle Specific 5-cycle label	6/19/2014	16064	N	N
Compact Ccar	Vehicle Specific 5-cycle label	6/19/2014	16067	N	N
Subcompa car	Vehicle Specific 5-cycle label	6/19/2014	16065	N	N
Subcompa car	Vehicle Specific 5-cycle label	6/19/2014	16068	N	N
Subcompa car	Vehicle Specific 5-cycle label	6/19/2014	16066	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	6/12/2014	15576	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	6/12/2014	15575	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	5/15/2014	15400	N	N
Small SUV 4WD	Vehicle Specific 5-cycle label	6/19/2014	16059	N	N
Subcompa car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
Two Seate car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
Compact Ccar	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
Compact Ccar	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
Subcompa car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
Subcompa car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	5/21/2014	15737	N	N
Two Seate car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
Two Seate car	Vehicle Specific 5-cycle label	7/14/2014	15678	N	N
Two Seate car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
Two Seate car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
Two Seatecar	Vehicle Specific 5-cycle label	7/4/2014	16523	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16085	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16169	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
Compact Ccar	Derived 5-cycle label	8/25/2014	16388	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
Compact Ccar	Derived 5-cycle label	8/25/2014	16339	N	N
Subcompa car	Derived 5-cycle label	7/28/2014	16086	N	N
Subcompa car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
Subcompa car	Derived 5-cycle label	8/25/2014	16389	N	N
Subcompa car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
Subcompa car	Derived 5-cycle label	8/25/2014	16340	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
Subcompa car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16492	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16198	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16482	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16533	N	N
Compact Ccar	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
Compact Ccar	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
Compact Ccar	Derived 5-cycle label	8/25/2014	16429	N	N

Compact Ccar	Derived 5-cycle label	8/25/2014	16468	[redacted]	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/28/2014	16380	[redacted]	N	N
Compact Ccar	Derived 5-cycle label	8/4/2014	16485	[redacted]	N	N
Compact Ccar	Derived 5-cycle label	8/25/2014	16450	[redacted]	N	N
Compact Ccar	Vehicle Specific 5-cycle label	8/25/2014	16222	[redacted]	N	N
Compact Ccar	Derived 5-cycle label	7/28/2014	16534	[redacted]	N	N
Compact Ccar	Vehicle Specific 5-cycle label	7/28/2014	16381	[redacted]	N	N
Midsize Cacar	Derived 5-cycle label	7/14/2014	16393	[redacted]	N	N
Midsize Cacar	Derived 5-cycle label	7/14/2014	16273	[redacted]	N	N
Midsize Cacar	Derived 5-cycle label	7/14/2014	16449	[redacted]	N	N
Midsize Cacar	Derived 5-cycle label	7/28/2014	16283	[redacted]	N	N
Midsize Cacar	Vehicle Specific 5-cycle label	8/26/2014	15686	[redacted]	N	N
Small SUV 2WD	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N
Small SUV 4WD	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N
Standard SUV 4WD	Vehicle Specific 5-cycle label	8/15/2014	15417	[redacted]	N	N
Standard SUV 4WD	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N

Relabel D	Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	Engine Coc	N		N	N			
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	N			Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivati	Y	Continuou	Y	Multi-lobe	
N	N	N			N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivati	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N			N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine cod	N		N	N			
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	Y	Deactivati	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	N		Y	CONTINUC	Y	Audi Valve	

N	N	Engine Coc	N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc	N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc	N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc	N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc	N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc	Y	Deactivatic	Y Continuou	Y Multi-lobe
N	N	Engine Coc	Y	Deactivatic	Y Continuou	Y Multi-lobe
N	N	Engine Coc	Y	Deactivatic	Y Continuou	Y Multi-lobe
N	N	Engine Coc	N	Y	CONTINUCY	AUDI VALV
N	N	Generatior	N	Y	CONTINUCY	AUDI VALV
N	N	Generatior	N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc	Y	Deactivatic	Y Continuou	Y Multi-lobe
N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine Coc	Y	Deactivatic	Y Continuou	Y Multi-lobe
N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine Coc	Y	Deactivatic	Y Continuou	Y Multi-lobe
N	N	Engine Coc	N	Y	INLET AND	N
N	N	Y		Cylinder de	Y Variation c	N
N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine Coc	Y	ELECTRON	Y HYDRAULI	N
N	N	Engine Coc	Y	ELECTRON	Y HYDRAULI	N
N	N	ENGINE CC	N	Y	INLET AND	N
N	N	Engine Co	Y	ELECTRO	Y HYDRAUL	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	N	N	
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	N	N	
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	N	N	
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	N	N	
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	N		Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	Engine Coc	N	N	N	
N	N	Engine Coc	N	N	N	
N	N	2.0L Engin	N	Y	CONTINUCY	Audi Valve
N	N	2.0L Engin	N	Y	CONTINUCY	Audi Valve
N	N	Engine Coc	N	Y	MECANICA	N

N	N	Engine Coc	N	Y	MECANICA N
N	N	Engine Coc	N	Y	MECANICA N
N	N	Engine Coc	N	N	N
N	N	Engine Coc	N	N	N
N	N	Engine Coc	N	N	N
N	N	Engine Coc	N	N	N
N	N	Engine Coc	N	Y	MECANICA N
N	N	Engine Coc	N	Y	MECANICA N
N	N	Engine Coc	N	Y	MECANICA N
N	N	Engine Coc	N	N	N
N	N	Engine Coc	N	N	N
N	N	Engine cod	N	Y	Electronic N
N	N	N		Y	position of N
N	N	N		Y	position of N
N	N	Engine Coc	N	N	N
N	N	N		Y	INTAKE / E N

Energy St	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Energ	Batt Spec	Batt Char	Comments
Battery(s)		1	Lithium Ior		266	5.00	37.0	On-Board	

e, Beetle Conv.

YSTEM
YSTEM
YSTEM
YSTEM
YSTEM
YSTEM
YSTEM
YSTEM
YSTEM

YSTEM

YSTEM

djustment. The fastener lifter is the reverse designed, the fuel injection lobe lift is zero. Deactivated cam lobe

YSTEM

djustment. The fastener lifter is the reverse designed, the fuel injection lobe lift is zero. Deactivated cam lobe
onically contolled and hydraulically adjusted.
YSTEM
G
G
YSTEM
YSTEM

YSTEM

M ADJUSTEMENT
M ADJUSTEMENT
RIABLE / MECHANICAL-HYDRAULIC
RIABLE / MECHANICAL-HYDRAULIC
M ADJUSTEMENT
M ADJUSTEMENT
RIABLE / MECHANICAL-HYDRAULIC
RIABLE / MECHANICAL-HYDRAULIC
djustment
djustment

djustment. The fastener lifter is the reverse designed, the fuel injection lobe lift is zero. Deactivated cam lobe
G Exhaust valves only

YSTEM
YSTEM
YSTEM
YSTEM
YSTEM
djustable. The first valve lift of 1 is the valve is designed, to use injection and lobe lift is zero. Deactivation
djustable. The first valve lift of 1 is the valve is designed, to use injection and lobe lift is zero. Deactivation
djustable. The first valve lift of 1 is the valve is designed, to use injection and lobe lift is zero. Deactivation
YSTEM
YSTEM
YSTEM
djustable. The first valve lift of 1 is the valve is designed, to use injection and lobe lift is zero. Deactivation
RIABLE / MECHANICAL-HYDRAULIC
djustable. The first valve lift of 1 is the valve is designed, to use injection and lobe lift is zero. Deactivation
RIABLE / MECHANICAL-HYDRAULIC
djustable. The first valve lift of 1 is the valve is designed, to use injection and lobe lift is zero. Deactivation
RIABLE / MECHANICAL-HYDRAULIC
ke and exhaust valves on a single camshaft. No change in valve overlaps.
BLE // TWO CAMSHAFTS (2) TDI Configuration is in the Bugati Veyron and Grand Sport.
ONTROLLED CONTINUOUSLY VVT
ONTROLLED CONTINUOUSLY VVT
RIABLE / MECHANICAL-HYDRAULIC
EXHAUST VALVE CONTROL CONTINUOUSLY VVT
N INTAKE CAMS
N INTAKE CAMS
N INTAKE CAMS
e, Beetle Conv.
N INTAKE CAMS
e, Beetle Conv.
N INTAKE CAMS
N INTAKE CAMS
e, Beetle Conv.
N INTAKE CAMS
e, Beetle Conv.
ctronically controlled and hydraulically adjusted
ctronically controlled and hydraulically adjusted
ctronically controlled and hydraulically adjusted

e, Beetle Conv.
e, Beetle Conv.

N INTAKE CAMS

N INTAKE CAMS
N INTAKE CAMS
e, Beetle Conv.

e, Beetle Conv.
N INTAKE CAMS
N INTAKE CAMS
N INTAKE CAMS
e, Beetle Conv.
e, Beetle Conv.
nt
ctronically controlled and hydraulically adjusted
ctronically controlled and hydraulically adjusted

ED HYDRAULICALLY AND CONTROLLED ELECTRONICALLY

# Capacit	Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive Mo

s transmission in 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater t
s transmission in 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater t
s transmission in 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater t

s transmission in 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater t

s transmission in 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater t

s transmission in 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater t

Motor Ger	Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V
					GDI	Spark Ignit			N
					CRDI	Common F			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					CRDI	Common F			N
					GDI	Spark Ignit			N
					CRDI	Common F			N
					GDI	Spark Ignit			N
han 25 kmh					GDI	Spark Ignit			N
					CRDI	Common F			N
					GDI	Spark Ignit			N
han 25 kmh					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit	N		N
					GDI	Spark Ignit	N		N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					CRDI	Common F			N
AC Inducti		40			GDI	Spark Ignit	N	N	N
					CRDI	Common F			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
					GDI	Spark Ignit			N
han 25 kmh					GDI	Spark Ignit			N
					GDI	Spark Ignit	N		N

	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
han 25 kmh	GDI	Spark Ignit	N
han 25 kmh	GDI	Spark Ignit	N
han 25 kmh	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit N	N
	GDI	Spark Ignit N	N
han 25 kmh	GDI	Spark Ignit	N
	MFI	Multipoint N	N
han 25 kmh	GDI	Spark Ignit	N
	MFI	Multipoint N	N
han 25 kmh	GDI	Spark Ignit	N
	MFI	Multipoint N	N
	MFI	Multipoint	N
	MFI	Multipoint	N
	MFI	Multipoint	N
	MFI	Multipoint	N
	GDPI	Spark Ignit	N
	MFI	Multipoint/	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	CRDI	Common R	N
	GDI	Spark Ignit	N
	CRDI	Common R	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	CRDI	Common R	N
	GDI	Spark Ignit	N
	CRDI	Common R	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	CRDI	Common R	N
	CRDI	Common R	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N
	GDI	Spark Ignit	N

GDI	Spark Ignit	N
GDI	Spark Ignit	N
CRDI	Common R	N
MFI	Multipoint	N
MFI	Multipoint	N
CRDI	Common R	N
GDI	Spark Ignit	N
GDI	Spark Ignit	N
GDI	Spark Ignit	N
CRDI	Common R	N
CRDI	Common R	N
GDI	Spark Ignit	N
GDI	Spark Ignit	N
GDI	Spark Ignit	N
CRDI	Common R	N
GDI	Spark Ignit	N

Oil Viscos	Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su
5W40	VW N	No	Auto(AM-S	Auto(AM-S					
5W40	VW N	No	Auto(AM-S	Auto(AM-S					
5W40	VW N	No	Auto(AM-S	Auto(AM-S					
5W40	VW N	No	Auto(AM-S	Auto(AM-S					
5W40	VW N	No	Auto(AM-S	Auto(AM-S					
5W40	VW N	No	Auto(AV-S	Auto(AV-S					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Manual(M	Manual(M					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Manual(M	Manual(M					
5W40	VW N	No	Auto(AV-S	Auto(AV-S	Audi A6 CV				
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Auto(S8)	Auto(S8)	Audi A6 qu				
5W30	VW Y	Yes	Auto(S8)	Auto(S8)					
5W40	VW Y	Yes	Auto(S8)	Auto(S8)					
5W30	VW Y	Yes	Auto(S8)	Auto(S8)					
5W40	VW Y	Yes	Auto(S8)	Auto(S8)					
5W30	VW Y	Yes	Auto(S8)	Auto(S8)					
5W30	VW Y	Yes	Auto(S8)	Auto(S8)					
5W40	VW Y	Yes	Auto(S8)	Auto(S8)					
5W30	VW Y	Yes	Auto(S8)	Auto(S8)					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	N	No	Auto(S6)	Auto(S6)					
5W40	N	No	Auto(S6)	Auto(S6)					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Auto(S8)	Auto(S8)					
5W30	VW Y	Yes	Auto(S8)	Auto(S8)					
5W40	VW Y	Yes	Auto(S8)	Auto(S8)					
5W30	VW N	No	Auto(S8)	Auto(S8)					
5W40	VW N	No	Auto(S8)	Auto(S8)	Audi Q7				
5W/30,	VW N	No	Auto(AM-S	Auto(AM-S					
5W/30,	VW N	No	Manual(M	Manual(M					
10W60	VW N	No	Auto(AM-S	Auto(AM-S					
10W60	VW N	No	Manual(M	Manual(M					
5W/30,	VW N	No	Auto(AM-S	Auto(AM-S					
5W/30,	VW N	No	Manual(M	Manual(M					
10W60	VW N	No	Auto(AM-S	Auto(AM-S					
10W60	VW N	No	Manual(M	Manual(M					
5W30	VW N	No	Auto(AM-S	Auto(AM-S					
5W30	VW N	No	Auto(AM-S	Auto(AM-S					
5W30	VW N	No	Auto(S8)	Auto(S8)					
5W40	N	No	Auto(AM-S	Auto(AM-S					

5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W30	VW	N	No	Auto(AM-S	Auto(AM-S
5W30	VW	N	No	Auto(AM-S	Auto(AM-S
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W40	VW	N	No	Auto(S8)	Auto(S8)
5W40		N	No	Auto(AM-S	Auto(AM-STT Coupe c
5W40		N	No	Auto(AM-S	Auto(AM-STT Coupe c
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W30	VW	N	No	Auto(S8)	Auto(S8)
0W40 / V	VN		No	Auto(S8)	Auto(S8)
10W60	VW	N	No	Auto(AM-S	Auto(AM-S
5W30	VW	Y	Yes	Auto(AM-S	Auto(AM-S
5W30	VW	Y	Yes	Auto(AM-S	Auto(AM-S
5W30	VW	N	No	Auto(AM-S	Auto(AM-S
5W30	VW	N	No	Auto(AM-S	Auto(AM-SVENENO
5W40	VW	N	No	Auto(S6)	Auto(S6)
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(S6)	Auto(S6)
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W-40	VW	N	No	Auto(S6)	Auto(S6)
5W40 / V	VN		No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Auto(S6)	Auto(S6)
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(S6)	Auto(S6)

5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Auto(S6)	Auto(S6) Jetta Base
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(S6)	Auto(S6)
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Manual(M	Manual(M
5W40	VW	N	No	Auto(AM-S	Auto(AM-S
5W40	VW	N	No	Auto(S6)	Auto(S6) Tiguan fro
5W40	VW	N	No	Auto(S6)	Auto(S6)
5W30	VW	N	No	Auto(S8)	Auto(S8)
5W40	VW	N	No	Auto(S8)	Auto(S8)

[illegible]	[illegible]	EPA Calculated Gas G	[illegible]	[illegible]	#1 Smog R	#1 Mfr Sm	#1 EPA Sm
	34.9		7	7	FVGAV02.(		9
	48.3		8	8	FVGAV02.(		5
	36.2		7	7	FVGAV02.(		9
	34.3		6	6	FVGAV02.(		9
	35.2		7	7	FVGAV02.(		9
	35.4		7	7	FVGAV02.(		5
	32.7		6	6	FVGAJ02.0		5
	33.1		6	6	FVGAV02.(		5
	30.1		5	5	FVGAJ02.0		5
	32.7		6	6	FVGAJ02.0		5
	33.1		6	6	FVGAV02.(		5
	36.9		7	7	FVGAV02.(		5
	30.0		5	5	FVGAV02.(		5
	28.1		5	5	FVGAJ03.0		5
	37.7		7	6	FVGAJ03.0		5
	27.9		5	5	FVGAJ03.0		5
	37.7		7	6	FVGAJ03.0		5
	28.8		5	5	FVGAV03.(		5
	28.0		5	5	FVGAV04.(		5
	36.9		7	6	FVGAJ03.0		5
	28.8		5	5	FVGAV03.(		5
	27.6		5	5	FVGAV04.(		5
	21.1		4	4	FVGAV06.3		5
	31.2		6	6	FVGAJ02.0		5
	30.0		5	5	FVGAV02.(		5
	29.5		5	5	FVGAV02.(		5
	29.6		5	5	FVGAJ02.0		5
	27.2		5	5	FVGAJ03.0		5
	34.3		7	5	FVGAJ03.0		5
	34.0		6	6	FVGAT02.(		5
	28.1		5	4	FVGAT03.(		5
	23.1		4	4	FVGAT03.(		5
	20.7		4	4	FVGAV04.2		5
	17.2		2	2	FVGAV04.2		5
	19.6		3	3	FVGAV05.2		5
	17.0		2	2	FVGAV05.2		5
	20.7		4	4	FVGAV04.2		5
	17.2		2	2	FVGAV04.2		5
	19.6		3	3	FVGAV05.2		5
	17.0		2	2	FVGAV05.2		5
	22.8		4	4	FVGAV04.2		5
	22.6		4	4	FVGAV04.2		5
	24.1		4	4	FVGAV04.(		5
	33.2		6	6	FVGAV02.(		5

26.9	[redacted]	5	5 FVGAJ03.0	5
23.5		5	5 FVGAJ03.0	5
26.9		5	5 FVGAJ03.0	5
23.5		5	5 FVGAJ03.0	5
26.4		5	5 FVGAJ03.0	5
25.4		5	5 FVGAV04.(	5
25.4		5	5 FVGAV04.(	5
25.0		5	5 FVGAV04.(	5
24.9		4	4 FVGAJ03.0	5
33.3		6	6 FVGAV02.(	5
33.3		6	6 FVGAV02.(	5
23.7		4	4 FVGAV04.(	5
19.5		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
15.9		1	1 FVGAV06.8	5
12.6		1	1 FVGAV08.(	5
16.4		1	1 FVGAV06.5	5
14.6		1	1 FVGAV06.5	5
20.0		3	3 FVGAV05.2	5
15.8		1	1 FVGAV06.	5
37.0		7	7 FVGAV02.(	7
35.9		7	7 FVGAV02.(	7
33.9		6	6 FVGAV02.(	7
46.6		8	7 FVGAV02.(	5
33.1		6	6 FVGAV02.(	7
46.4		8	7 FVGAV02.(	5
35.9		7	7 FVGAV02.(	7
33.3		6	6 FVGAV02.(	7
45.8		8	7 FVGAV02.(	5
33.1		6	6 FVGAV02.(	7
45.3		8	7 FVGAV02.(	5
32.2		6	6 FVGAJ02.0	5
31.4		6	6 FVGAJ02.0	5
24.8		5	5 FVGAV03.(	5
32.4		6	6 FVGAV02.(	5
38.9		7	7 FVGAV02.(	9
39.3		7	7 FVGAV02.(	9
48.3		8	8 FVGAV02.(	5
48.7		8	8 FVGAV02.(	5
35.9		7	7 FVGAV02.(	9
35.8		7	7 FVGAV02.(	9
39.4		7	7 FVGAV02.(	7

38.4	[redacted]	7	7 FVGAV02.(	7
34.8		7	7 FVGAV02.(	7
49.2		8	8 FVGAV02.(	5
34.9		6	6 FVGAV02.(	5
35.9		7	7 FVGAV02.(	5
48.7		8	8 FVGAV02.(	5
34.0		6	6 FVGAV02.(	7
37.7		7	7 FVGAV02.(	7
37.3		7	7 FVGAV02.(	7
46.2		8	7 FVGAV02.(	5
46.9		8	7 FVGAV02.(	5
28.5		5	5 FVGAV03.(	5
29.7		5	5 FVGAJ02.0	5
29.6		5	5 FVGAJ02.0	5
29.6		5	5 FVGAT03.(	5
25.0		4	4 FVGAT03.(	5


#3 Smog R
#3 Mfr Sm
#3 EPA Sm
SmartWay
#4 Smog R

FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	7
FVGAV02.(	7
FVGAV02.(	5

FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5

[illegible]	$ You Save	$ You Spen	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu
	500		379	267	328		
	3250		326	236	285		
	750		362	256	314		
	0		379	280	334		
	500		366	271	323		
	500		374	280	332		
		1000	410	290	356		
	0		398	277	343		
		1500	446	314	386		
		1000	410	290	356		
	0		398	277	343		
	750		360	272	320		
		1500	452	306	386		
		2000	482	326	412		
	1250		416	267	349		
		2500	493	321	416		
	1250		416	267	349		
		2000	473	303	397		
		2000	484	299	401		
	1000		426	280	360		
		2000	473	303	397		
		2000	492	310	410		
		5250	640	403	534		
		1000	420	317	373		
		1500	451	313	389		
		1500	446	316	387		
		1500	452	322	393		
		2000	496	347	429		
	500		430	328	385		
		0	369	298	337		
		1750	541	369	464		
		4750	570	409	498		
		5750	656	394	538		
		9250	772	439	622		
		6750	686	400	557		
		9250	753	454	618		
		5750	656	394	538		
		9250	772	439	622		
		6750	686	400	557		
		9250	753	454	618		
		4750	562	379	480		
		4750	558	398	486		
		4000	573	336	466		
		0	381	289	340		

	2500	488	321	413
	3250	519	341	439
	2500	488	321	413
	3250	519	341	439
	2500	500	341	428
	3250	531	330	441
	3250	531	330	441
	3250	534	331	442
	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	6750	629	441	544
	11000	831	523	692
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
3250		331	224	283
750		358	271	319
750		355	258	311
2250		347	238	298

2000		351	239	301
1000		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
3250		332	223	283
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	CO2-City L	CO2-Hwy I	CO2-Comb	CO2-PHEV 240V Char	120V Char
309.0	191.0	255.9	378.7	267.1	328.5		
247.7	165.1	210.5	325.6	236.3	285.4		
289.0	188.0	243.6	362.1	255.5	314.1		
305.0	200.0	257.8	378.6	280.1	334.3		
294.0	198.0	250.8	366.0	271.0	323.2		
292.0	199.0	250.2	373.7	280.2	331.6		
323.0	206.0	270.4	410.3	289.6	356.0		
321.2	202.4	267.7	398.0	276.6	343.4		
353.0	224.0	295.0	445.7	313.9	386.4		
323.0	206.0	270.4	410.3	289.6	356.0		
321.2	202.4	267.7	398.0	276.6	343.4		
282.0	189.0	240.2	360.0	272.0	320.4		
358.0	219.0	295.4	452.0	306.0	386.3		
383.5	233.0	315.8	481.7	326.0	411.6		
331.0	194.0	269.4	415.7	267.3	348.9		
385.0	236.0	318.0	492.9	320.9	415.6		
331.0	194.0	269.4	415.7	267.3	348.9		
376.5	225.0	308.3	473.4	302.9	396.7		
391.0	224.0	315.9	483.9	299.0	400.7		
339.0	198.0	275.6	425.6	280.1	360.1		
376.5	225.0	308.3	473.4	302.9	396.7		
396.0	226.0	319.5	492.3	309.7	410.1		
515.0	310.0	422.8	640.3	403.3	533.6		
331.0	226.0	283.8	419.7	316.6	373.3		
357.5	223.0	297.0	451.0	312.5	388.7		
357.0	230.0	299.9	445.6	315.7	387.1		
358.0	230.0	300.4	451.6	321.9	393.2		
390.0	251.0	327.4	496.0	347.0	429.0		
348.0	231.0	295.4	430.5	328.5	384.6		
380.0	223.0	309.4	369.0	298.0	337.0		
446.0	260.0	362.3	541.0	369.0	463.6		
458.0	295.0	384.6	569.6	409.5	497.6		
540.6	299.8	432.3	656.3	394.3	538.4		
651.3	362.7	521.4	771.6	439.1	622.0		
577.0	309.4	456.6	685.6	400.2	557.2		
646.3	377.5	525.3	753.1	454.0	618.5		
540.6	299.8	432.3	656.3	394.3	538.4		
651.3	362.7	521.4	771.6	439.1	622.0		
577.0	309.4	456.6	685.6	400.2	557.2		
646.3	377.5	525.3	753.1	454.0	618.5		
466.0	296.0	389.5	562.0	379.0	479.6		
463.0	307.0	392.8	558.0	398.0	486.0		
467.0	253.0	370.7	573.0	336.1	466.4		
311.0	214.0	267.4	381.4	289.2	339.9		

396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
708.0	392.0	565.8	831.0	523.0	692.4
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
252.0	156.0	208.8	330.7	224.1	282.7
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3

272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
253.0	155.0	208.9	331.8	222.7	282.7
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

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(EPA Determined)

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 7/22/2014 12:06:37 PM
Subject: RE: 2015 FE Guide attached

Thanks Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, July 21, 2014 7:11 PM
To: Thomas, Richard (EEO)
Subject: 2015 FE Guide attached

Richard,

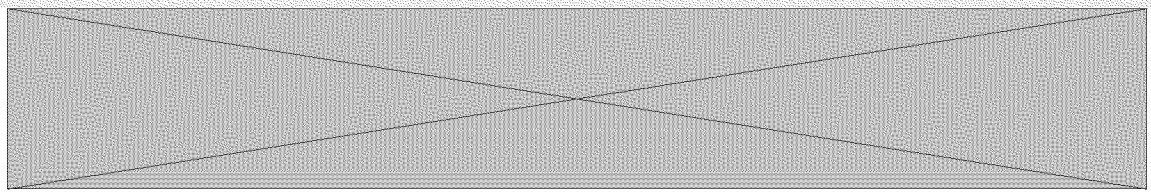
Here is the FE Guide as of approx 10AM this morning---just as the macro ran---I didn't have time to clean up the data and check for errors.

It looks OK to me.

Dave

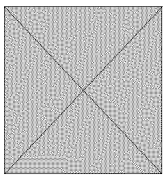
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From: Green Car Reports
Sent: Tue 7/22/2014 4:04:55 PM
Subject: Green Car Report Daily Headlines

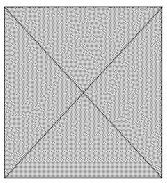
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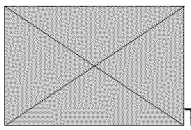
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2015 VW e-Golf Driven, Audi A8 e-tron Diesel, Confirmed Hydrogen-Car Logic: Today's Car News

Jul 22, 2014 03:12 pm | feedback@highgearmedia.com (Stephen Edelstein)

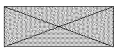


Today on Green Car Reports: A quick preview drive of the 2015 Volkswagen e-Golf, Audi confirms a diesel engine for the A8 e-tron plug-in hybrid, and a new take on Honda and Toyota's hydrogen fuel-cell plans. All this and more on Green Car Reports. The 2015 Volkswagen e-Golf electric car is nimble, refined, and very quiet. Does Honda and Toyota's...

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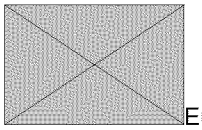






Opel Ampera (Euro Chevy Volt) Axed Over Slow Sales?

Jul 22, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)



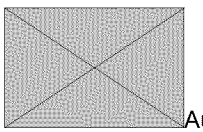
European buyers may soon have one fewer plug-in vehicle to choose from, with news that the Opel Ampera--European cousin to the Chevrolet Volt--could be dropped due to slow sales. The Ampera arrived to much critical acclaim, just as the Volt did in the U.S. While expensive--it hit the market at just shy of $60,000 back in

2012--critics praised the...

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Audi Confirms V-6 Diesel For Plug-In Hybrid A8 Sedan

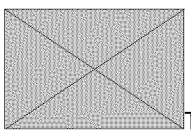
Jul 22, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 Audi has revealed more details of its second major plug-in hybrid drivetrain, set to appear first in the upcoming Audi A8 e-tron luxury sedan. The German automaker has chosen to go down the diesel route with its larger plug-in hybrid setup, which Auto Express reveals will use a new 3.0-liter V-6 diesel. Until now, it hadn't been clear whether Audi...

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Japan's Fuel-Cell Vehicle Pursuit: Is It Obama's 'All Of The Above' Approach?

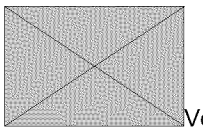
Jul 22, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 Two Japanese automakers, Toyota and Honda, are putting their weight behind fuel-cell vehicles, rather than battery electric cars, as the alternative-propulsion technology of the future. Time will tell if that's a wise decision but they do at least have one significant supporter--the Japanese government. There is method behind Japan's decision...

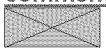
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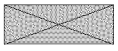
2015 Volkswagen e-Golf: Quick Preview Drive Of All-Electric Hatchback

Jul 21, 2014 10:15 pm | feedback@highgearmedia.com (Bengt Halvorson)

 Volkswagen has bet very heavily on diesel, with its TDI models; yet it's preparing to bring its all-electric Golf, called the e-Golf, to the U.S. later this year. And we took another short drive in it this past week—this time on U.S. shores. The e-Golf, as it will be sold beginning this November, in California, Oregon, and a few other...

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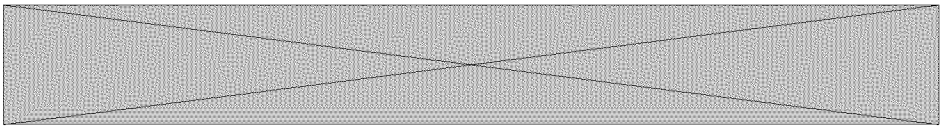
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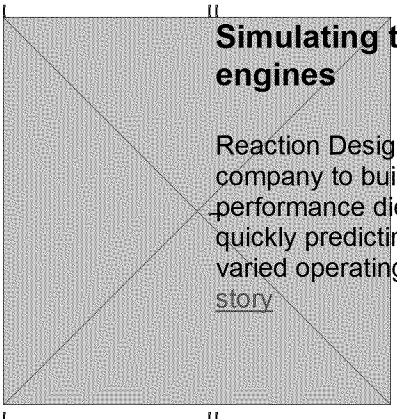
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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE International
Sent: Tue 7/22/2014 6:54:15 PM
Subject: Automotive Engineering Powertrain Technology eNewsletter July 2014

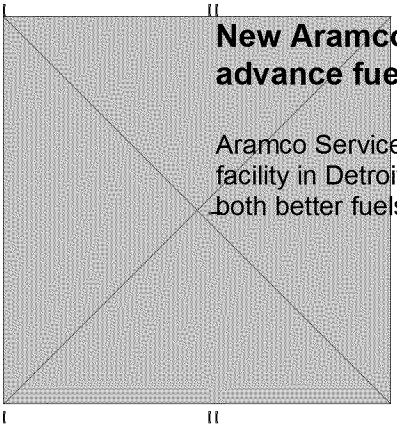


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Simulating to track soot formations in diesel engines

Reaction Design worked with a German premium automotive company to build cylinder-combustion simulations for a high-performance diesel engine with the goal of accurately and quickly predicting combustion performance and the effects of varied operating conditions on soot emissions. Read full story



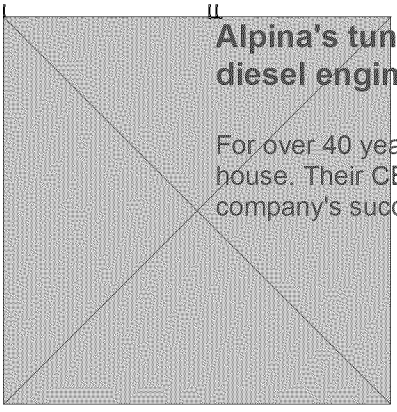
New Aramco research center in Detroit to advance fuels and engine development

Aramco Services, a unit of Saudi Aramco, is opening a facility in Detroit to collaborate with automakers to produce both better fuels and better engines. Read full story

SAE Career Center--What career opportunities are you missing?

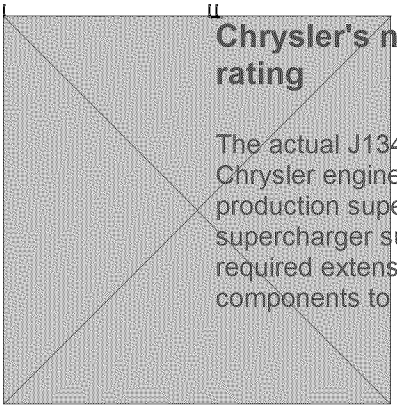
Today, more and more employers and recruiters are looking for the qualified passive job seeker. Have you looked at the horizon lately and asked yourself any of the following questions? Am I where I should be? Does my work challenge me daily, weekly, monthly or not at all? Am I content with the status quo or do I want more? Did you answer no or maybe? Take the next step to exploring your opportunities and for a chance to be where you deserve. Visit the SAE Career Center > Post your anonymous resume > Search Job Openings > Create Job

Alerts > and more.



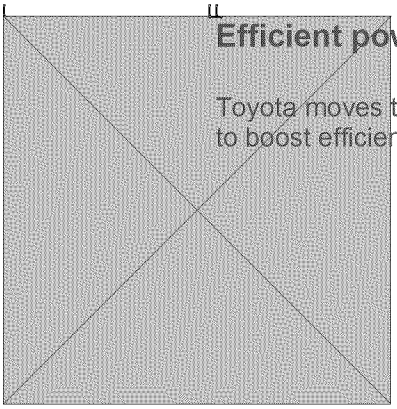
Alpina's tuning magic transforms BMW gas, diesel engines

For over 40 years, Alpina has been BMW's 'outside' tuning house. Their CEO explains the synergies behind his company's success. Read full story



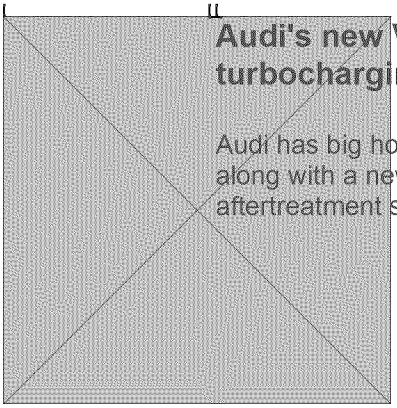
Chrysler's new Hellcat V8 gets 707-hp SAE rating

The actual J1349 rating is more than 100 hp more than Chrysler engineers teased in late May. The automaker's first production supercharged V8 uses a Lysholm-type twin-screw supercharger supplied by IHI. The engine's high-output spec required extensive upgrading of engine reciprocating components to handle the extra loads. Read full story



Efficient power electronics for hybrids and EVs

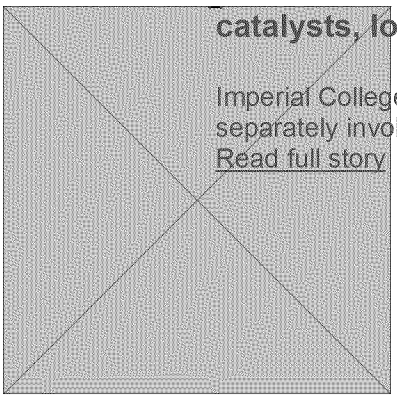
Toyota moves toward silicon carbide-based semiconductors to boost efficiency. Read full story



Audi's new V6 diesel to feature electric turbocharging, new NOx technology

Audi has big hopes for its new "e-boosting" turbo system, along with a new V6 diesel and a new type of diesel aftertreatment system. Read full story

U.K. universities lead R&D for low-cost



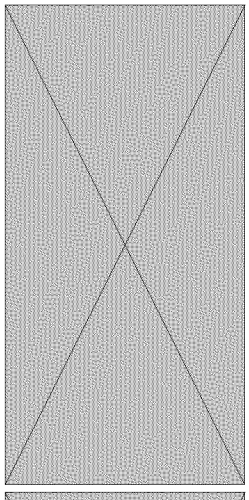
catalysts, low-CO2 combustion

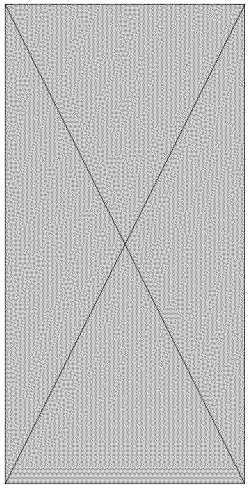
Imperial College, London, and the University of Bath, are separately involved in work aimed at cleaner production cars.
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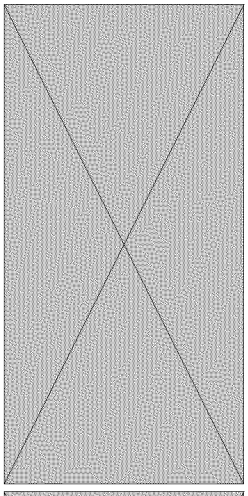
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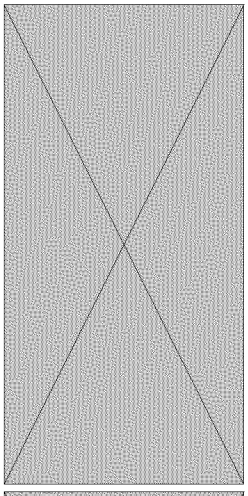
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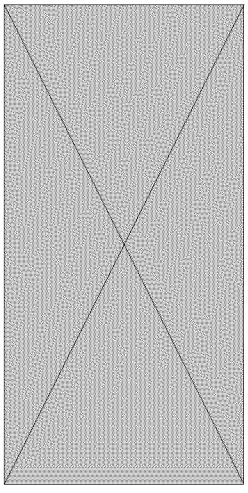
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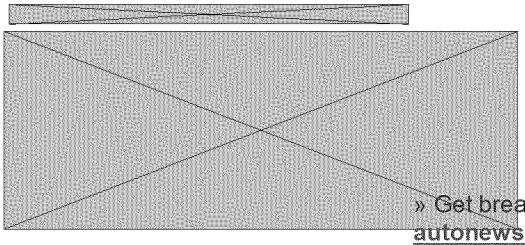
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 7/22/2014 8:36:28 PM
Subject: DAILY: Chrysler recalls older Jeep Commanders and Grand Cherokees for ignition switch | Can the new F-150 get better mpg than Ram? | Fields makes first personnel moves | Remembering Nick Scheele

Today's most read story

Buick Regal, Volvo S60 join Consumer Reports' list of top upscale, sports sedans

July 22, 2014



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TOP NEWS

Chrysler recalls older Jeep Commanders and Grand Cherokees for ignition switch

4:15 pm U.S. ET | Jul 22

Chrysler Group will recall as many as 792,300 2006-07 Jeep Commanders and 2005-06 Jeep Grand Cherokees globally to fix ignition switches that could be knocked out of the "on" position, causing a stall and possible loss of power to the airbags. ... » READ

New F-150 will improve fuel economy, but can it best Ram 1500?

2:50 pm U.S. ET | Jul 22

Ford's new aluminum-bodied 2015 F-150 pickup coming this fall might not be able to beat Chrysler Group's Ram 1500 and claim best-in-class fuel economy. ... » READ

Ford taps top engineer to lead Lincoln

UPDATED: 7/22/14 3:11 pm ET - adds details, links
11:52 am U.S. ET | Jul 22

In his first round of major personnel moves as Ford CEO, Mark Fields appointed the company's top engineer to lead Lincoln worldwide, replacing Jim Farley. Kumar Galhotra, 48, vice president of engineering since August 2013, will become president of Lincoln on Sept. 1, reporting directly to Fields. ... » READ

Lockheed exec Washington succeeds Mascarenas as Ford's chief technical officer

UPDATED: 7/22/14 2:36 pm ET - adds details, links
1:10 pm U.S. ET | Jul 22

Ford has hired Lockheed executive Ken Washington as chief technical officer and vice president of research and advanced engineering, effective August 18, in a series of changes to the company's leadership team. He succeeds Paul Mascarenas, 53, who will retire after 32 years at Ford, effective October 1. ... » READ

Buick Regal, Volvo S60 join Consumer Reports' list of top upscale, sports sedans

UPDATED: 7/22/14 7:49 am ET - details added
6:00 am U.S. ET | Jul 22

The Buick Regal, refreshed with a revamped powertrain for 2014, now ranks among the top upscale sports sedans tested by Consumer Reports, just behind the BMW 328i but high enough to easily top the magazine's road test scores for the Cadillac ATS and CTS sedans. ... » READ

Sonic's Q2 profits triple on extraordinary items; expenses rise

UPDATED: 7/22/14 4:18 pm ET - adds stock close
12:18 pm U.S. ET | Jul 22

Sonic Automotive posted higher revenue and net profit during the second quarter, but expenses increased as the retailer continues to ready its launches of a new customer-experience initiative and standalone used-car stores. ... » READ

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Where U.S. shoppers draw the line on buying very small cars

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Fiat, VW deny report that they are in merger talks

Barra defends GM's top lawyer as senators press for more legal staff changes

Top lawyer keeps pall over GM

Ford to tout new F-450 towing capacity, hp, torque as best in class

A VW-FCA deal would be risky, reasonable

Viral video rankings for week of 7/15/2014

Mercedes-Benz coins phrase; Fiat embraces heritage

12:01 am U.S. ET | Jul 22

"#ThatAMGFeeling," likens driving the Mercedes-Benz CLA45 AMG to sky-diving, surfing, and staring up at the night sky ...

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» Nov. 13-14 - Automobilwoche Kongress

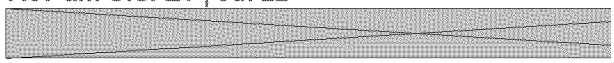
» January 13-14 - Automotive News World Congress

» January 22 - Automotive News World Congress

Asbury posts Q2 double-digit profit, revenue gains

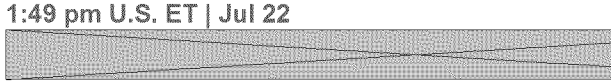
UPDATED: 7/22/14 10:55 am ET -- adds details

7:07 am U.S. ET | Jul 22



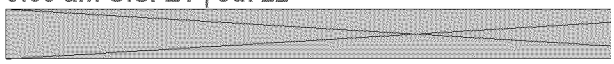
VW CEO to address workers about billions in planned cost cuts

1:49 pm U.S. ET | Jul 22



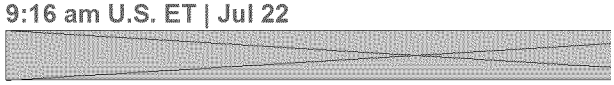
Opel/Vauxhall to woo budget clients with low-end cars, report says

3:09 am U.S. ET | Jul 22



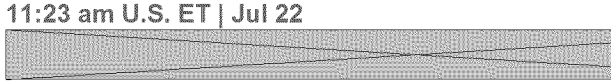
Former Ford digital exec Monty joins PR and social media firm

9:16 am U.S. ET | Jul 22



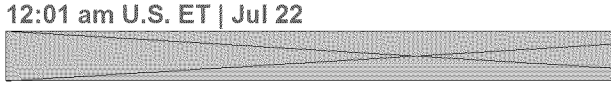
Metals and plastics company NN to buy supplier Autocam in $300 million deal

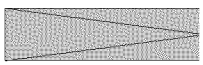
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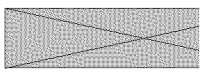
Targeted digital video ads deliver preferred car colors

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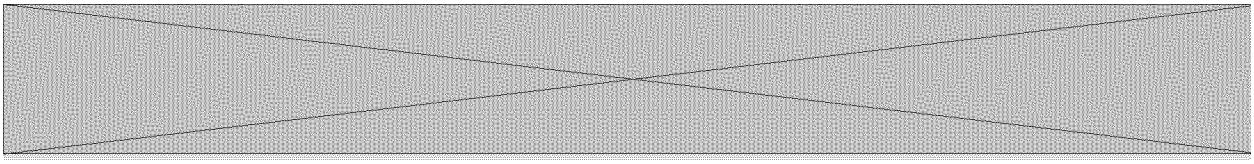


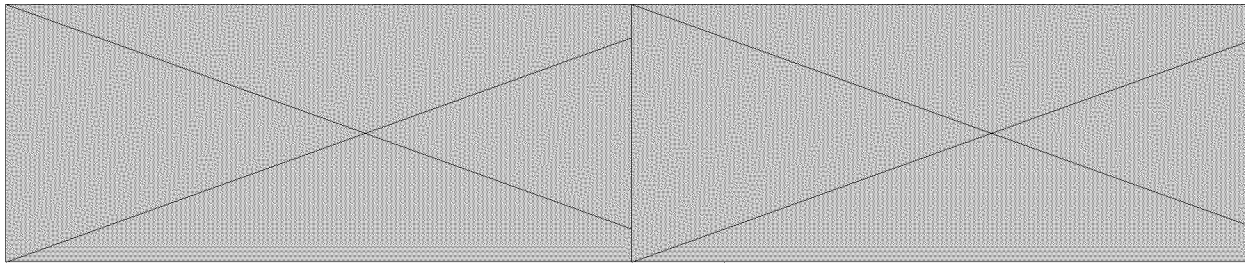
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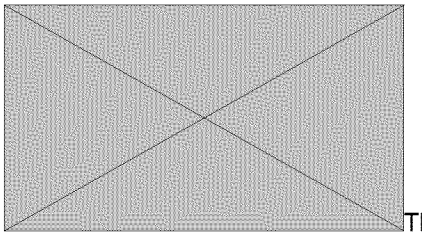
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From: WardsAuto OEM Edition
Sent: Wed 7/23/2014 8:00:30 AM
Subject: Ford Launches Expedition in Small, But Stabilized Segment

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July 23, 2014

Aisin Seiki Opens New NA Headquarters Near Detroit

 The facility houses two business units that were in separate locations, Aisin World Corp. of America and Aisin Technical Center of America, under one roof.

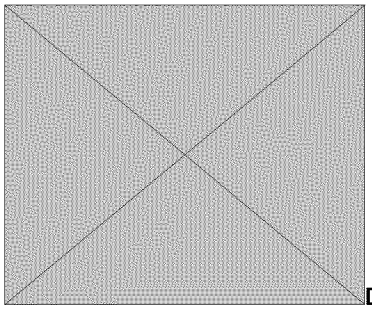
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Faurecia Opens $30 Million NA Headquarters

Since auto sales and production began recovering, the supplier has gone from about 20 manufacturing sites in North America to 47.

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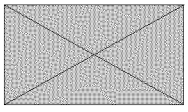
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Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

Ten years ago, we began publishing Protomold Design Tips to help product developers create better injection-molded plastic parts. We've covered materials, texture, draft, sink and many other design considerations. More than 100 tips later, we remain steadfast in our effort to continue informing designers and engineers in all areas of injection-molded part design. As a resource, we've gathered some of our most useful manufacturing advice from the past decade in a collection of essential tip s.

Autoline Daily

 Opel Restructured Again; Future of Battery Technology?; Hellcat Driving Impressions

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Improve passenger compartment and seat design with the improved SAE International H-Point Machine The HMP-II defines and locates the standard seating reference point and offers additional leg, shoe, and pedal reference points; lumbar support measurement; easier installation over the SAE HPM-I. Ideal for advanced design/research applications. See video here.

Industry Voices: Despite Initial Opposition, NAFTA Proven Winner for All

In October 2013, trade between NAFTA partners totaled $103.1 billion, up 4.5% from a year earlier, marking the first month in the pact's history in which trade exceeded $100 billion in a single month.

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The race to 54.5 mpg by 2025 is on.

ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

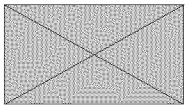
Ford Launches New Expedition in Small, But Stabilized Segment

The '15 Expedition will be available for the first time in a Platinum trim level, which will slot above the previous top-of-the-line King Ranch edition.

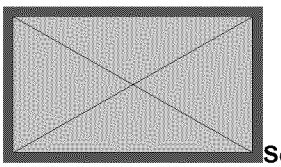
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 GM Has No Fix for Recalled Cadillacs; Mazda MX-5 Perfect Throwback

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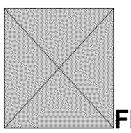
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Ford Ups Ante in Middle East, Africa

This latest plan increases the product rollout from the 17 new or refreshed vehicles Ford earmarked for the region in November.

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Fiat-Chrysler Could Be Good Fit With VW

 **FINAL INSPECTION BLOG**
VW Chairman Ferdinand Piech long has had his eye on the Alfa Romeo brand, but would the rest of Fiat-Chrysler fit? Maybe not as badly as you would think at first blush.

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GM, Delphi Testify on Ignition Switch; Industry Issue May Exist

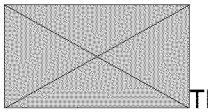
Delphi CEO Rodney O'Neal, supplier of the ignition switch, reveals that of the 120,000 engineering changes requested by automakers last year only 40% included an updated part number.

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Test Drive: Dodge Challenger SRT Hellcat

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Heck of a Car

 The car breaks the 700-hp barrier but isn't like a wild animal that turns on you.

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Gallery: '15 Dodge Challenger SRT Hellcat

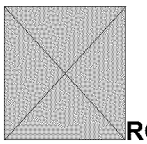
The car from Chrysler's Street and Racing Technolgy team is the most powerful non-exotic ever.

Jeep Renegade Adds to Growing Small CUV Segment

Popularity of this new breed of vehicles is growing rapidly worldwide, and more automakers are beginning to test the U.S. market, where buyers are expected to migrate from small hatchbacks and sedans.

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New for '20: The HALcat

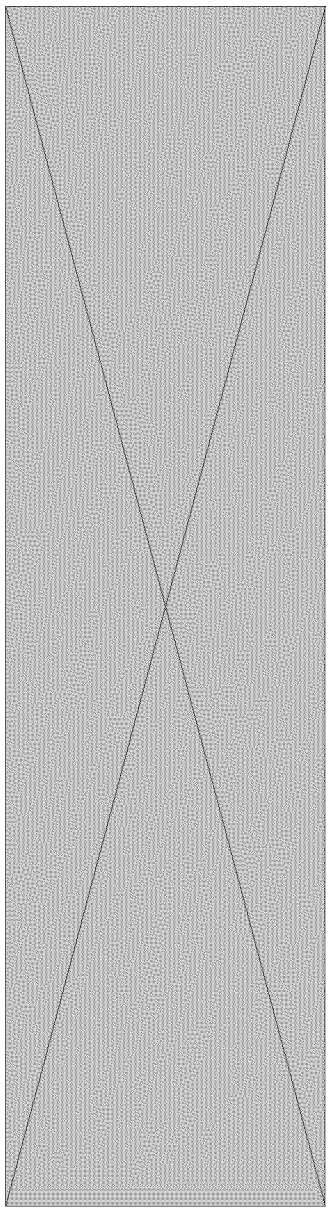
 **ROAD AHEAD BLOG**
Engines are becoming more potent as the self-driving car keeps evolving. Will the smart cars of the future use their horsepower for good and not evil?

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Nissan Selling Replacement Batteries to Grow Leaf Appeal

Extending the Nissan electric vehicle's range and improving the ability of its owners to charge while on the go are two areas of improvement.

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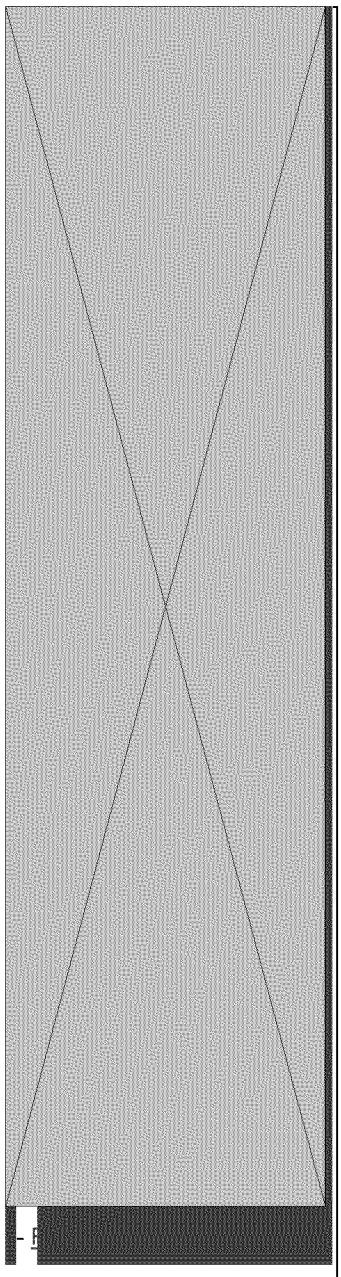
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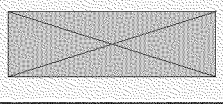
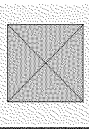
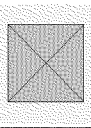
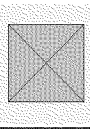
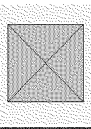
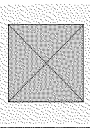
Bringing new vehicles to market has never been more challenging. Not only are new vehicles more



complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

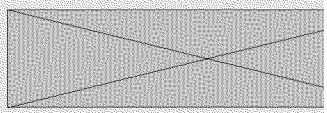
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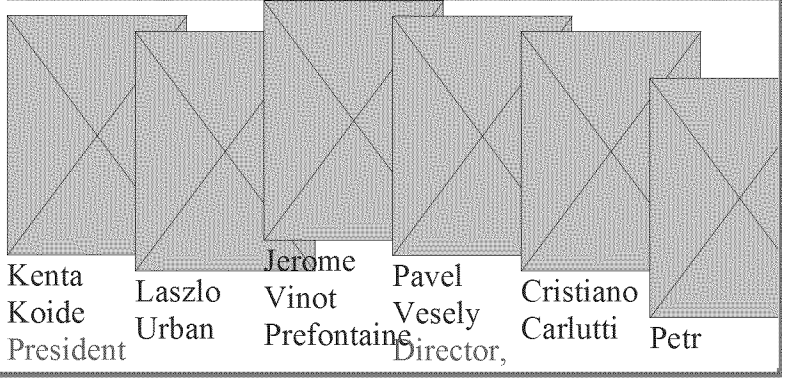
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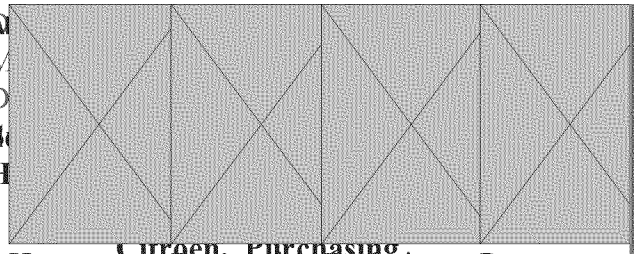
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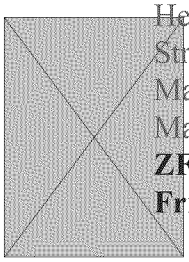
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CONFERENCE HIGHLIGHTS:

> **1 - TO - 1 MEETINGS:** Use the 10-minute face-to-face meetings with purchasing directors of OEMs & Tier1 Suppliers.

> **Industry: ACEA Overview**: Ensuring the industry's growth: trade, investment and regulation

> **Suppliers: CLEPA Overview**: European and global auto trends, forecasts and policy initiatives

> **Carmakers:** Production, expansion and investment plans: All the region's key OEMs invited

> **Leaders Debate:** Top executives will discuss demand, trends, new technologies and exports

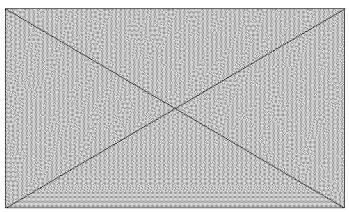
> **R&D - Second Wave**: innovation and establishment of new R&D and engineering centres

> **Networking Opportunities: 12+ hours of networking** – cocktail reception, 1-to1 meetings, lunches, networking breaks and more…

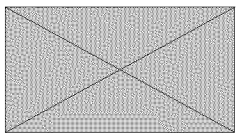
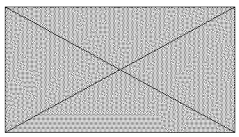
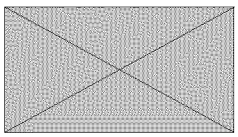
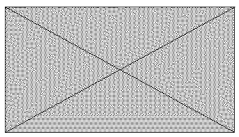
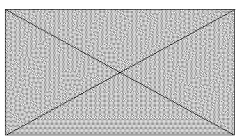
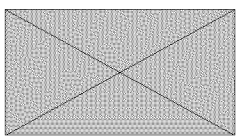
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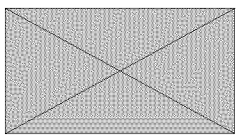
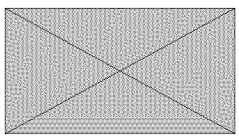
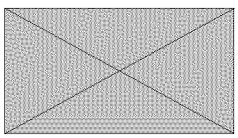
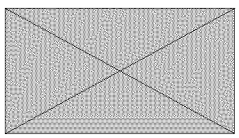
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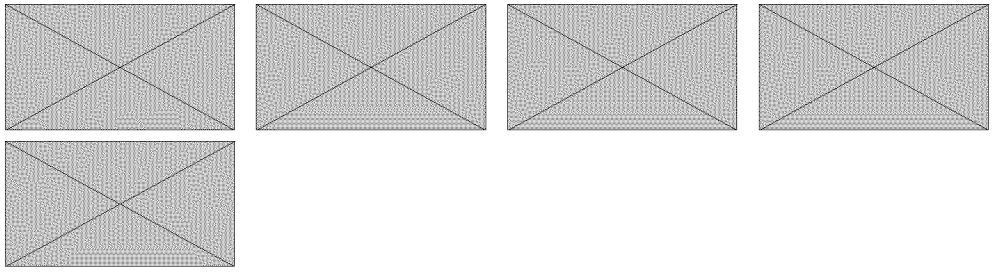


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To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Wed 7/23/2014 3:14:11 PM
Subject: VW Group THC question

Jim,

Have you been able to find out anything on the THC ambient adjust question we had last week?

We'd like to resolve it before our Ex. 4 - CBI ing coming up next week.

Thanks,

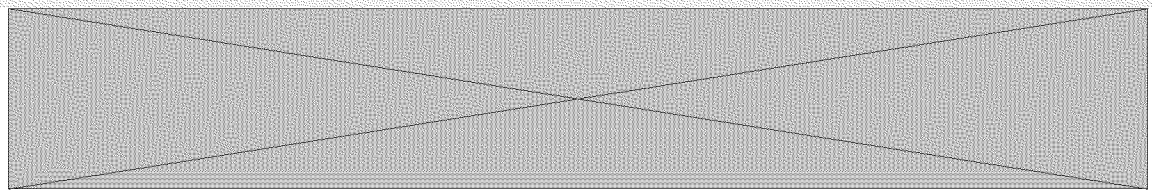
Bill Rodgers

VWGoA EEO

(248) 754-4219

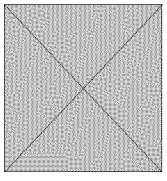
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Wed 7/23/2014 4:06:29 PM
Subject: Green Car Report Daily Headlines

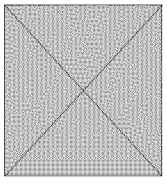
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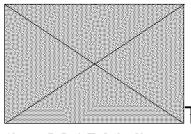
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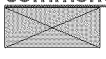


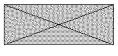
2015 VW e-Golf Vs. Golf TDI, Tesla Model X Prep, 2015 Ford F-150 Engine Details: Today's Car News

Jul 23, 2014 03:41 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: We drive the 2015 Volkswagen e-Golf electric car and Golf TDI diesel back to back, Tesla halts Model S assembly to prepare for the Model X, and Ford details fuel-efficient engines for the 2015 F-150. All this and more on Green Car Reports. Electric or diesel? We compare the 2015 Volkswagen e-Golf and Golf TDI in a...

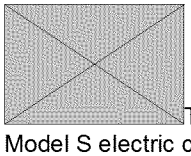
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Tesla Halts Model S Assembly, Prepares For Model X

Jul 23, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

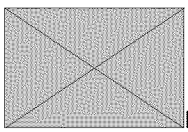
 Tesla Motors has halted production of the Model S electric car while it upgrades the assembly line for its next vehicle--the Model X crossover. A two-week production hiatus will give the firm enough time to complete a full $100 million upgrade to the plant, before production

restarts at increased speed. According to Bloomberg, the upgrade will add...

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Ford Details Small Fuel-Saving Engine For Big F-150 Lineup

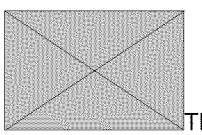
Jul 23, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 It's been a while since full-size trucks have used engines as small as 2.7 liters, but that's exactly what the 2015 Ford F-150 will use when you tick the Ecoboost box in the dealership. It's not just 2.7 liters, of course--you also get six cylinders and two turbochargers, and it's those that Ford says gives it capability and performance to match...

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Electric Cars Equal Gasoline Cost Of Just 75 Cents A Gallon

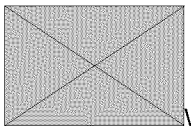
Jul 23, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 The last time you could buy a gallon of gasoline in the U.S. for 75 cents was around the late 1970s. If you own an electric car today though, the price you're paying for electricity is equivalent to about 75 cents per gallon. READ: Tesla's Important Not Only For Electric Cars But For Silicon Valley: Opinion According to a study by the Northeast...

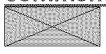
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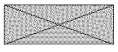
2015 Volkswagen e-Golf Vs. Golf TDI: Back-To-Back Test Drive

Jul 23, 2014 03:20 am | feedback@highgearmedia.com (Bengt Halvorson)

 With the introduction of the 2015 Volkswagen e-Golf late this year, VW will be the only automaker to offer (in the U.S.) both diesel and all-electric versions of the same model in the U.S. While we expected to plan a back-to-back drive of these two models at some point, we didn't expect it to come so soon. At a ride-and-drive event called...

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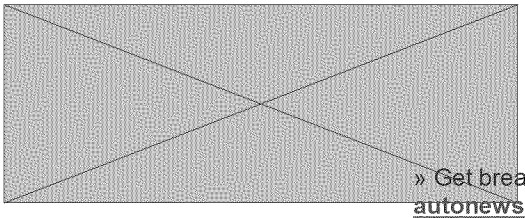
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Wed 7/23/2014 8:39:30 PM
Subject: DAILY: GM lists more Cobalt, Ion fatalities in quarterly crash data | GM issues 6 more recalls | Hyundai earns a win in J.D. Power APEAL Study | Fiat investors urged to vote against Chrysler merger

Today's most read story

Chrysler recalls older Jeep Commanders and Grand Cherokees for ignition switch

July 23, 2014



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TOP NEWS

THE GM RECALL

GM lists more Cobalt, Ion fatalities in quarterly crash data

3:37 pm U.S. ET | Jul 23

In the first quarter, General Motors received claims that defects in the Chevrolet Cobalt and Saturn Ion caused 17 deaths and 167 injuries, according to data it submitted to federal safety regulators. ... » READ

THE GM RECALL

GM recalls 717,950 vehicles, pushing year's recall tally to 60

2:07 pm U.S. ET | Jul 23

General Motors is recalling another 717,950 vehicles in the United States, mostly 2010-12 model year cars and crossovers, lifting its total for the year to a record 60 safety campaigns covering around 29 million vehicles globally. ... » READ

Hyundai nabs a win in J.D. Power APEAL Study a month after leading IQS

UPDATED: 7/23/14 2:18 pm ET -- Jaguar comments
10:00 am U.S. ET | Jul 23

For the first time, Hyundai is the top-ranked nonpremium brand in the J.D. Power 2014 U.S. Automotive Performance, Execution and Layout Study -- a month after leading nonpremium brands in the company's Initial Quality Study. ... » READ

Fiat investors urged to vote against Chrysler merger

2:59 pm U.S. ET | Jul 23

Proxy advisor ISS has recommended that Fiat investors vote against a cross-border merger of the Italian carmaker and its U.S. unit Chrysler at a meeting on Aug. 1, saying it would reduce shareholder rights. ... » READ

Lithia Q2 profits hit record highs

UPDATED: 7/23/14 4:17 pm ET - adds details, correction
8:39 am U.S. ET | Jul 23

Lithia Motors today reported the highest adjusted quarterly net income in the company's history -- a 29 percent surge to $35 million -- on higher revenues and cost controls. ... » READ

BEST PRACTICES

Cue from airlines helps dealership cut no-shows

12:01 am U.S. ET | Jul 21

Robert Karbaum came up with is an "appointment boarding pass" to send to customers' smartphones via text or e-mail minutes after they schedule a test drive. ... » READ

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Fiat, VW deny report that they are in merger talks

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changes

Top lawyer keeps pall over GM

Dealers' phones ring again

A VW-FCA deal would be risky, reasonable

Suburban Collection buys BMW, Mercedes dealerships in Ann Arbor

4:08 pm U.S. ET | Jul 23

Daimler quarterly earnings rise 12% on sales of S class

2:25 am U.S. ET | Jul 23

VW 'urgently' needs higher profit to fund future growth, Winterkorn tells staff

12:01 am U.S. ET | Jul 23

Marchionne says Fiat Chrysler tie-up with VW was never on

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For
» Nov. 13-14 - Automobilwoche Kongress
» January 13-14 - Automotive News World Congress
» January 22 - Automotive News World Congress

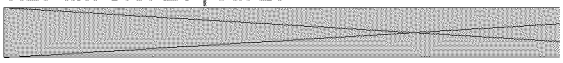
UPCOMING WEBINARS

» July 30 - Increasing Gross

agenda

UPDATED: 7/23/14 7:48 am ET -- adds comments

6:27 am U.S. ET | Jul 23



Kia in talks to open $1.5 billion Mexico assembly plant, report says

UPDATED: 7/22/14 7:09 pm ET - details added

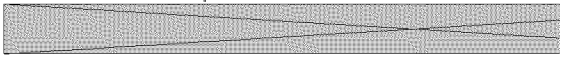
6:52 pm U.S. ET | Jul 22



GM sales surge despite recalls as Barra proves quality sells

UPDATED: 7/23/14 3:56 pm ET -- updates GM stock price

9:10 am U.S. ET | Jul 23



GM to invest $800 million to renovate operations, add 1,750 jobs in Michigan

6:07 pm U.S. ET | Jul 22



New-look Yaris will start at $15,670

2:54 pm U.S. ET | Jul 23



Japan readies fuel cell subsidies in bet on Toyota's next big thing

10:44 am U.S. ET | Jul 23



Nissan to add L.A. to 'No Charge to Charge' Leaf promotion

4:01 pm U.S. ET | Jul 23



Nissan pledges to keep it quirky after cutting Cube

6:35 am U.S. ET | Jul 23

Federal-Mogul posts $5 million net loss in Q2 as revenue rises

3:34 pm U.S. ET | Jul 23

Brembo to invest nearly $100M in new Michigan foundry, expand capacity

6:54 am U.S. ET | Jul 23

Profits

» August 13 - Effective Customer Experiences

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Nov. 13-14 - Automobilwoche Kongress

» January 13-14 - Automotive News World Congress

» January 22 - Automotive News World Congress

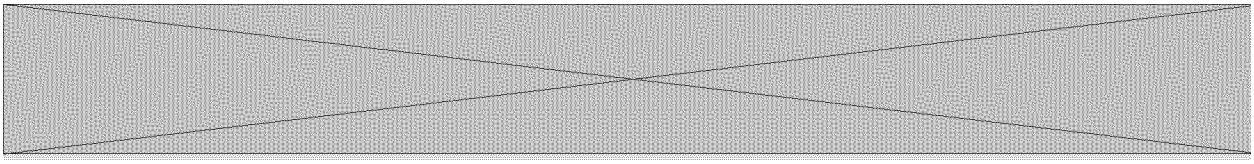
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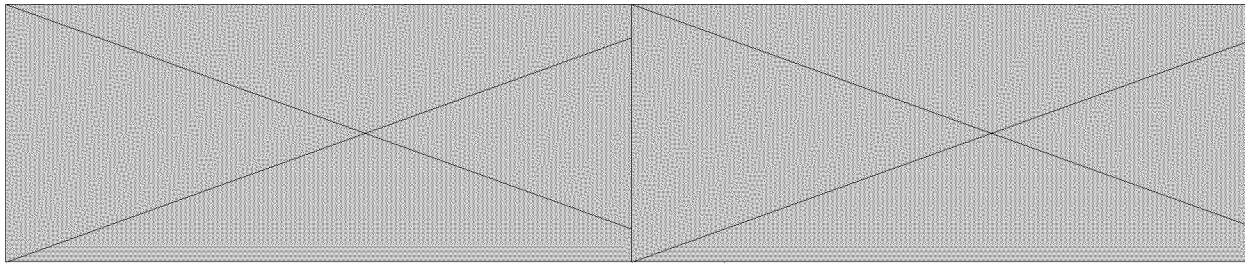
» July 30 - Increasing Gross Profits by MAX Digital

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To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Schrodt, Thomas[schrodt.thomas@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Snyder, Jim
Sent: Wed 7/23/2014 10:07:53 PM
Subject: RE: EPA Dyno decriptions

Tom, can you answer this or forward it on?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, July 23, 2014 11:21 AM
To: Snyder, Jim
Cc: Allen, Gregory (EEO); Giles, Michael (EEO)
Subject: EPA Dyno decriptions

Hi Jim,

Can you provide or direct me to information regarding the dynos used at your lab?

We are looking for the following:

Dyno type (front/4wheel)

Roller type Single roll / twin roller

Dyno id name/number

Thanks,

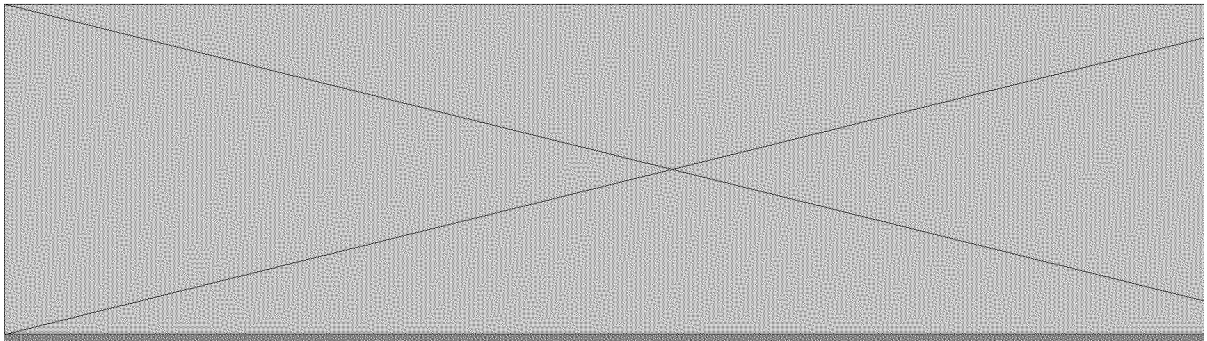
Bill Rodgers

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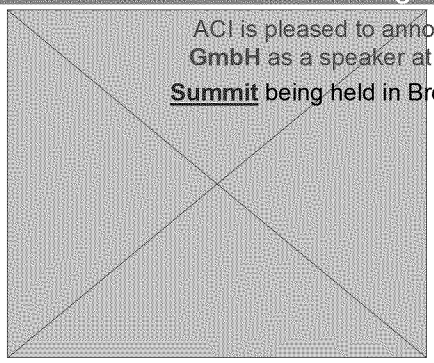
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: 3rd Carbon Dioxide Utilisation Summit
Sent: Thur 7/24/2014 9:31:11 AM
Subject: Sunfire CEO confirmed to give presentation on CO2 power-to-liquids

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ACI is pleased to announce **Carl Berninghausen**, **Sunfire GmbH** as a speaker at the **3rd Carbon Dioxide Utilisation Summit** being held in Bremen on 22nd & 23rd October 2014. .



Carl Berninghausen,

CEO,

Carl will be giving a presentation on "power-to-liquids - closing the carbon cycle" including:

- Sunfire - reversible process for efficient energy
- Fuel 1 - the first power-to-liquids pilot plant producing synthetic crude oil substitute from CO2
- Connection of electrical and chemical grid- business models and stakeholders

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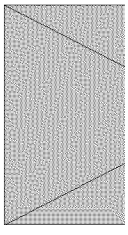
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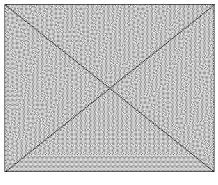
Rohan Baryah

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Location



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Sunfire GmbH

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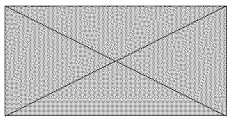
There is no extra charge to attend the site visit, but spaces are limited and allocated on a first come first served basis. Please register your attendance for the site visit when booking for the **3rd Carbon Dioxide Utilisation Summit**.

Places are strictly limited (40 spaces in total)

Book now to secure your space!

Conference Programme:

To download a copy of the latest programme, click the button below >



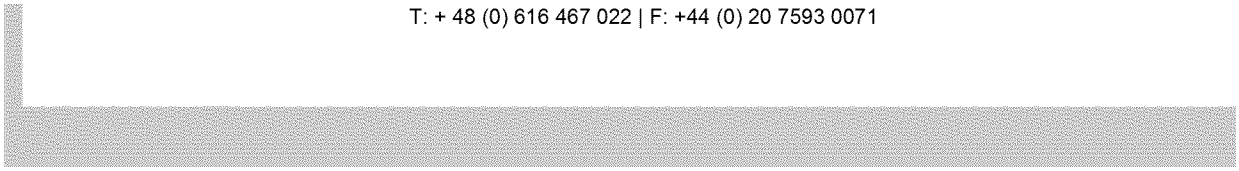
Confirmed Speakers Include:

- **Dr Hermann Pengg**, *Head of Renewable Fuels*, **Audi AG**
- **Carl Berninghausen**, *CEO*, **Sunfire GmbH**
- **Lothar Mennicken**, *Senior Scientific Officer*, **BMBF**
- **Dr Elías Rodríguez Martín**, *Head of Chemical Technical Services, Fossil Generation*, **Iberdrola**
- **Peter Radgen**, *Head of Innovation Center Carbon Capture & Storage*, **E.ON**
- **Prof. Gerard van Rooij**, *Principal Scientist*, **FOM Institute DIFFER**
- **Michele Aresta**, **CIRCC**
- **Frank Rogalla**, *Innovation and Technology Manager*, **FCC Aqualia**
- **Giorgio Dodero**, *Chairman*, **IPG**
- **Ed Rode**, *Principal Researcher*, **DNV GL**
- **Carlo Spinelli**, *Technical Planner*, **ENI**
- **Professor Ludo Diels**, *Research Manager*, **VITO**

And Many More!

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To: Boundy, Robert Gary (boundyrg@ornl.gov)[boundyrg@ornl.gov]
Cc: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 7/24/2014 11:12:04 AM
Subject: 2015 Lamborghini Huacan Image
Huracan_Giallo_Midas.png

Hi Bob;

I'm not sure if you still take care of this or not, but I have attached an image of the 2015 Lamborghini Huracan which can be used for the 2015 website of the fuel economy guide and that model index #025. The last time I looked there was no image on the website, so to make sure you have one, here you go.

Thanks and best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com



To: Garrison, Bruce[garrison.bruce@epa.gov]; Maury, Mark[maury.mark@epa.gov]; Sohacki, Lynn[sohacki.lynn@epa.gov]
From: Glas, Tobias
Sent: Thur 7/24/2014 1:12:21 PM
Subject: Test data

Ex. 7

Hi everybody,

Here is the information for the two Surveillance cars. If you need anything else don't hesitate to contact me.

Ex. 7 Convertible

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]; Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Schrodt, Thomas
Sent: Thur 7/24/2014 1:29:58 PM
Subject: RE: EPA Dyno decriptions

I will put that information together for you Jim.

Tom

From: Snyder, Jim
Sent: Wednesday, July 23, 2014 6:08 PM
To: Rodgers, William (EEO); Schrodt, Thomas
Cc: Allen, Gregory (EEO); Giles, Michael (EEO)
Subject: RE: EPA Dyno decriptions

Tom, can you answer this or forward it on?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, July 23, 2014 11:21 AM
To: Snyder, Jim
Cc: Allen, Gregory (EEO); Giles, Michael (EEO)
Subject: EPA Dyno decriptions

Hi Jim,

Can you provide or direct me to information regarding the dynos used at your lab?

We are looking for the following:

Dyno type (front/4wheel)

Roller type Single roll / twin roller

Dyno id name/number

Thanks,

Bill Rodgers

VWGoA EEO

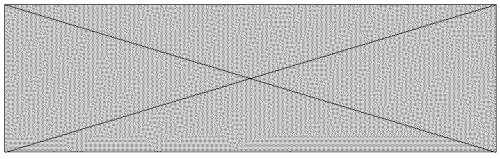
(248) 754-4219

To: Bunker, Byron[bunker.byron@epa.gov]
From: Automotive News
Sent: Fri 7/25/2014 1:05:16 PM
Subject: A.M. NEWSCAST: FBI seized listening devices at Ford HQ - report | VW chief denounces anti-Semitism | Why buyers are giving dealers a ring | Mini Legos

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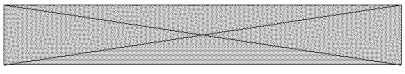
July 25, 2014



FBI search of Ford HQ »

VW chief calls for unity »

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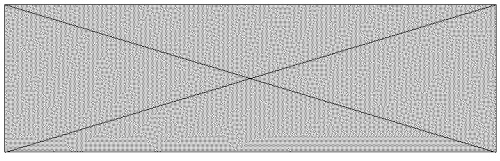
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 7/25/2014 1:05:49 PM
Subject: A.M. NEWSCAST: FBI seized listening devices at Ford HQ - report | VW chief denounces anti-Semitism | Why buyers are giving dealers a ring | Mini Legos

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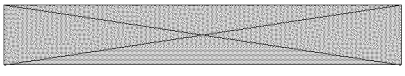
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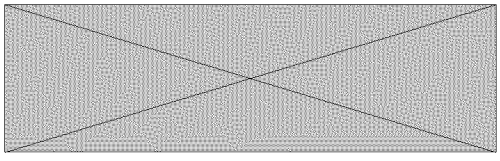
. .

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 7/25/2014 2:29:16 PM
Subject: A.M. NEWSCAST: FBI seized listening devices at Ford HQ - report | VW chief denounces anti-Semitism | Why buyers are giving dealers a ring | Mini Legos

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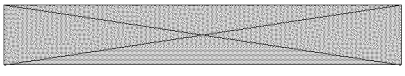
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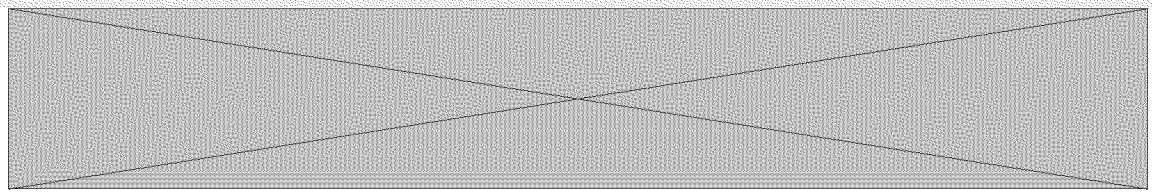
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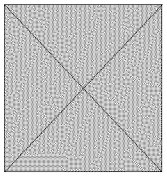
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Fri 7/25/2014 4:05:36 PM
Subject: Green Car Report Daily Headlines

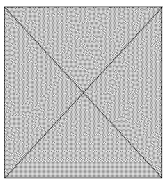
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The latest from your friends at GCR:

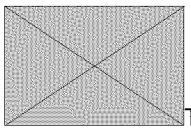
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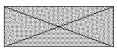
Electric-Car Torque Confusion, Quiet-Car Rules, 2015 Porsche Cayenne S E-Hybrid: Today's Car News

Jul 25, 2014 03:31 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Automakers call for a delay in the implementation of quiet-car rules, how electric-car torque figures can be deceptive, and details on the 2015 Porsche Cayenne S E-Hybrid plug-in crossover. All this and more on Green Car Reports. A comparison of the Fiat 500e and Chevrolet Spark EV shows how electric-car torque figures...

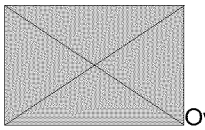
comments | read more





2015 Porsche Cayenne S E-Hybrid Will Be Third Plug-In For German Brand

Jul 25, 2014 03:28 pm | feedback@highgearmedia.com (John Voelcker)

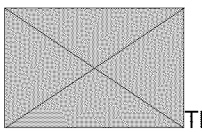
 Over the past few years, it's become clear that the German prestige makers are determined to offer plug-in electric vehicles across their various ranges. Some makers are more aggressive (BMW), some less so (Mercedes-Benz)--but by the end of next year, there will be

a dozen or more vehicles with plugs from the combined forces of Audi, BMW...

comments | read more

Quiet-Car Rules Must Be Delayed, Automakers Say: NHTSA Not Ready

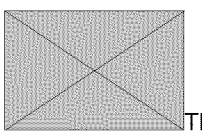
Jul 25, 2014 02:54 pm | feedback@highgearmedia.com (John Voelcker)

 The concern that very quiet hybrid and electric cars may pose a danger to unaware pedestrians has been around for a decade or more now. Back in 2010, Congress required the National Highway Traffic Safety Administration to develop rules for adding alert noises to cars running on silent electric power. The law was adopted at the urging of the...

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Nissan Leaf Vs BMW i3 Vs Volkswagen e-Golf: German Magazine Compares

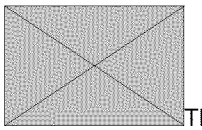
Jul 25, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 The BMW i3's styling has been divisive since its launch earlier this year but one thing that most agree on is its abilities--it's among the best electric cars yet. When Volkswagen launches its e-Golf though, BMW will face tough competition--and worldwide, the Nissan Leaf is still a best-selling electric car. German magazine Auto Bild has now...

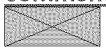
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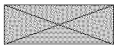
Fiat 500e Vs Chevy Spark EV: How Electric-Car Torque Figures Can Be Deceptive

Jul 25, 2014 11:00 am | feedback@highgearmedia.com (Bengt Halvorson)

 The 2014 Fiat 500e has far lower power and torque numbers than the 2014 Chevrolet Spark EV; yet at city speeds, of below 40 mph or so, the 500E feels (and is) quicker. Given their nearly identical curb weights, the numbers would suggest the Spark being far quicker. The Chevrolet Spark EV is rated at 141 horsepower and—as Chevy has been...

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To: Good, David[good.david@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov];
Jeff.Giuseppe@dot.gov[Jeff.Giuseppe@dot.gov]
From: Harry.Thompson@dot.gov
Sent: Fri 7/25/2014 8:26:15 PM
Subject: RE: 2012 CAFE - Any word yet on Porsche-VW letter?

I checked; it isn't signed, but Otto knows I will be visiting frequently starting next week.

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, July 25, 2014 2:12 PM
To: Thompson, Harry (NHTSA)
Cc: Hicks, Maurice (NHTSA); Letkiewicz, Thomas CTR (NHTSA); Zaremski, Sara; Wehrly, Linc
Subject: RE: 2012 CAFE - Any word yet on Porsche-VW letter?

Harry,

How is your legal staff coming on the letter?

Dave

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Wednesday, July 09, 2014 3:45 PM
To: Good, David
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov
Subject: RE: 2012 CAFE - EPA sent out two GHG/CAFE letters today (2012 Toyota PC and 2012 BYD---who makes small EV SUVs which are in the PC category for CAFE)

Message received, will check for Porsche & BYD tomorrow. I am reviewing a draft of the letter to VW re MY 2012 VW-Porsche CAFE. Hope to get it signed and sent within the next week.

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, July 09, 2014 3:34 PM
To: Thompson, Harry (NHTSA)
Cc: Dandy, Henrietta (NHTSA); Zaremski, Sara

Subject: 2012 CAFE - EPA sent out two GHG/CAFE letters today (2012 Toyota PC and 2012 BYD---who makes small EV SUVs which are in the PC category for CAFE)

Harry,

FYI

You should receive the EPA data files and a copy of the letter & attached summary report through the new automated process. As I understand it, you will need to check your EPA electronic mailbox (the reports are not emailed to you as in the past).

Let me know if the process doesn't work as expected---and whether I need to send you a courtesy email every time I do a CAFE. [It's no problem for me---just let me know who I should cc.]

Also, we are still waiting for any word on NHTSA's letter to VW telling them they need to combine VW Group & Porsche vehicle for 2012 CAFE purposes. Please let us know when you expect the letter will be signed.

Thanks

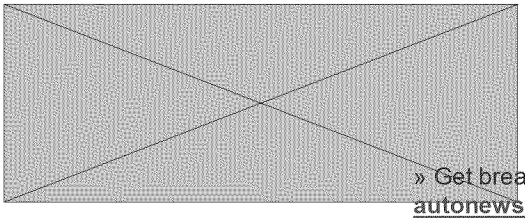
Dave

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 7/25/2014 8:40:06 PM
Subject: DAILY: Robust retail demand to push U.S. sales higher in July | Former Ford engineer investigated for possible espionage | Bentley eyes 5th model | '15 Porsche Cayenne packs new twin-turbo engine, moves up price ladder

Today's most read story

Ford, FBI investigating former engineer for possible espionage

July 25, 2014



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TOP NEWS

Strong retail demand to push U.S. sales higher in July, forecasts show

2:44 pm U.S. ET | Jul 25

The pace of U.S. auto sales has slowed slightly after hitting an eight-year high in June, but July's results are still shaping up to be at least 9 percent better than a year ago, according to four forecasts. The seasonally adjusted, annualized selling rate is expected to hit 16.6 million to 16. ... » READ

ZF's pursuit of TRW may spark wave of mergers in supply chain

12:01 am U.S. ET | Jul 25

The biggest auto-parts deal since 2007 may be just the start of consolidation, with Autoliv and Visteon among the next potential targets, analysts say. More auto parts companies may combine as overcapacity constrains their ability to add scale on their own. ... » READ

Ford, FBI investigating former engineer for possible espionage

UPDATED: 7/25/14 1:24 pm ET
6:38 am U.S. ET | Jul 25

An engineer recently fired by Ford is being investigated for possible espionage after the FBI found 8 listening devices installed in the company's world headquarters in Dearborn, Mich. ... » READ

Porsche Cayenne to offer new twin-turbo engine, plug-in hybrid for '15

1:15 pm U.S. ET | Jul 25

The freshened '15 Porsche Cayenne will offer a new twin-turbo engine, a plug-in hybrid model, and prices that range from 3 to 11 percent higher, when it goes on sale Nov. 1 in the United States. ... » READ

Bentley may add a fifth model after SUV launch

9:51 am U.S. ET | Jul 24

Bentley may add a fifth model to its lineup after it launches an SUV in 2016, CEO Wolfgang Duerheimer said. The new model could be a two-seat sports car or a larger model slotted between the Continental GT coupe and Mulsanne sedan. ... » READ

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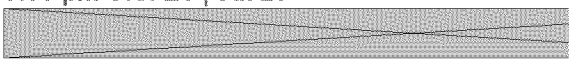
A VW-FCA deal would be risky, reasonable

Top lawyer keeps pall over GM

Buick Regal, Volvo S60 join Consumer Reports' list of top upscale, sports sedans

NHTSA to investigate older GM models for software, airbag glitch

3:03 pm U.S. ET | Jul 25



Lear profits rise on higher vehicle output, record seating volume, electrical gains

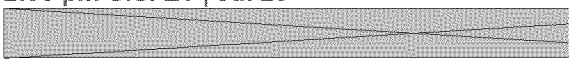
UPDATED: 7/25/14 3:41 pm ET

8:03 am U.S. ET | Jul 25



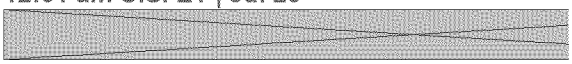
GM remains bullish on Chevrolet-Manchester United sponsorship deal

2:00 pm U.S. ET | Jul 25



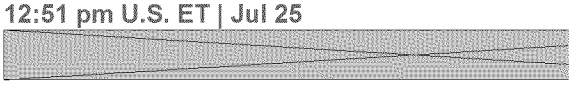
Audi, BMW and Mercedes pressure Ford, GM as UK market booms

12:01 am U.S. ET | Jul 25



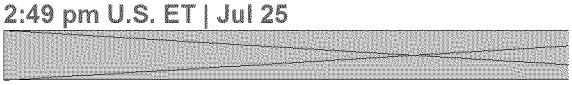
Mazda expands U.S. recall of cars with faulty Takata airbags

12:51 pm U.S. ET | Jul 25



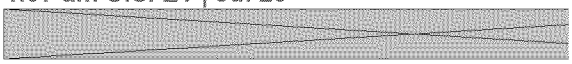
Hella planning IPO later this year, report says

2:49 pm U.S. ET | Jul 25



VW said to consider planning center in Brazil to revive sales

4:07 am U.S. ET | Jul 25

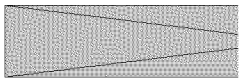


GM may put Brazil workers on paid leave

9:21 pm U.S. ET | Jul 24



South African union said to reject wage deal to end strike,



UPCOMING EVENTS

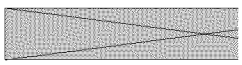
» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

» Nov. 13-14 - Automobilwoche Kongress

» January 13-14 - Automotive News World Congress

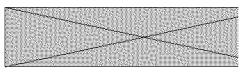
» January 22 - Automotive News World Congress



UPCOMING WEBINARS

» July 30 - Increasing Gross Profits
by MAX Digital

» Aug. 13 - Effective Customer Experiences
by SAS

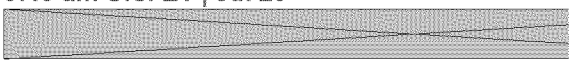


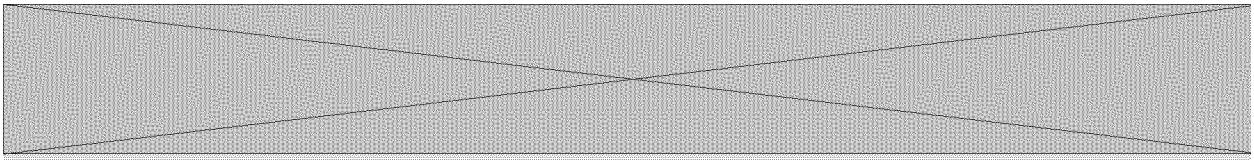
UPCOMING WEBINARS

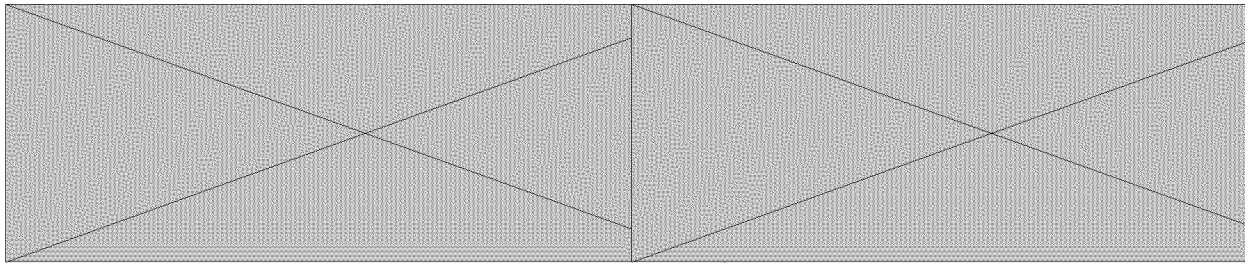
» Aug. 20 - Staffing: How to Get Your F&I Office Sized Right

resume car output

9:49 am U.S. ET | Jul 25







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. .

To: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
From: Good, David
Sent: Fri 7/25/2014 8:42:48 PM
Subject: RE: 2012 CAFE - Any word yet on Porsche-VW letter? [Thanks for checking] NNTO

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Friday, July 25, 2014 4:26 PM
To: Good, David
Cc: Maurice.Hicks@dot.gov; Jeff.Giuseppe@dot.gov
Subject: RE: 2012 CAFE - Any word yet on Porsche-VW letter?

I checked; it isn't signed, but Otto knows I will be visiting frequently starting next week.

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, July 25, 2014 2:12 PM
To: Thompson, Harry (NHTSA)
Cc: Hicks, Maurice (NHTSA); Letkiewicz, Thomas CTR (NHTSA); Zaremski, Sara; Wehrly, Linc
Subject: RE: 2012 CAFE - Any word yet on Porsche-VW letter?

Harry,

How is your legal staff coming on the letter?

Dave

From: Harry.Thompson@dot.gov [mailto:Harry.Thompson@dot.gov]
Sent: Wednesday, July 09, 2014 3:45 PM
To: Good, David
Cc: Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov
Subject: RE: 2012 CAFE - EPA sent out two GHG/CAFE letters today (2012 Toyota PC and 2012 BYD---who makes small EV SUVs which are in the PC category for CAFE)

Message received, will check for Porsche & BYD tomorrow. I am reviewing a draft of the letter to VW re MY 2012 VW-Porsche CAFE. Hope to get it signed and sent within the next week.

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, July 09, 2014 3:34 PM
To: Thompson, Harry (NHTSA)
Cc: Dandy, Henrietta (NHTSA); Zaremski, Sara
Subject: 2012 CAFE - EPA sent out two GHG/CAFE letters today (2012 Toyota PC and 2012 BYD---who makes small EV SUVs which are in the PC category for CAFE)

Harry,

FYI

You should receive the EPA data files and a copy of the letter & attached summary report through the new automated process. As I understand it, you will need to check your EPA electronic mailbox (the reports are not emailed to you as in the past).

Let me know if the process doesn't work as expected---and whether I need to send you a courtesy email every time I do a CAFE. [It's no problem for me---just let me know who I should cc.]

Also, we are still waiting for any word on NHTSA's letter to VW telling them they need to combine VW Group & Porsche vehicle for 2012 CAFE purposes. Please let us know when you expect the letter will be signed.

Thanks

Dave

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Fri 7/25/2014 11:47:20 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-7-23-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Attached are the data in Verify as of July 23, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

Note: The macro hadn't been double checking your 5 year fuel costs previously. I corrected the macro today. It did pick up a few errors, but most manufacturers had calculated the 5-year "You Save" or "You Spend" values correctly. Call me or email me if you need to discuss it a little. DOE doesn't use those values for www.fueleconomy.gov---they calculate their own values based on the weekly average fuel prices in the U.S.

The next normal posting of 2015 FE Label data will be on Aug 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

I'm out of the office on Monday but back on Tues (7/29).

Thanks

EPA comn	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2015 Volkswagen	Audi Group of	A3	VGA 7	1.8	4
Diesel;		2015 Volkswagen	Audi Group of	A3	VGA 101	2.0	4
		2015 Volkswagen	Audi Group of	A3 Cabriolet	VGA 6	1.8	4
		2015 Volkswagen	Audi Group of	A3 Cabriolet quattro	VGA 5	2.0	4
		2015 Volkswagen	Audi Group of	A3 quattro	VGA 4	2.0	4
		2015 Volkswagen	Audi Group of	A4	VGA 46	2.0	4
Error in incY		2015 Volkswage	Audi	A4 quattro	VGA 64	2.0	4
		2015 Volkswagen	Audi Group of	A4 quattro	VGA 49	2.0	4
		2015 Volkswagen	Audi Group of	A5 Cabriolet quattro	VGA 66	2.0	4
Error in incY		2015 Volkswage	Audi	A5 quattro	VGA 65	2.0	4
		2015 Volkswagen	Audi Group of	A5 quattro	VGA 50	2.0	4
		2015 Volkswagen	Audi Group of	A6	VGA 47	2.0	4
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 48	2.0	4
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 72	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	A6 quattro	VGA 17	3.0	6
		2015 Volkswagen	Audi Group of	A7 quattro	VGA 71	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	A7 quattro	VGA 18	3.0	6
		2015 Volkswagen	Audi Group of	A8	VGA 40	3.0	6
		2015 Volkswagen	Audi Group of	A8	VGA 11	4.0	8
Diesel;		2015 Volkswagen	Audi Group of	A8L	VGA 15	3.0	6
		2015 Volkswagen	Audi Group of	A8L	VGA 41	3.0	6
		2015 Volkswagen	Audi Group of	A8L	VGA 10	4.0	8
Error in incY		2015 Volkswage	Audi	A8L	VGA 14	6.3	12
		2015 Volkswagen	Audi Group of	allroad quattro	VGA 68	2.0	4
		2015 Volkswagen	Audi Group of	Q3	VGA 62	2.0	4
		2015 Volkswagen	Audi Group of	Q3 quattro	VGA 37	2.0	4
		2015 Volkswagen	Audi Group of	Q5	VGA 67	2.0	4
Error in incY		2015 Volkswage	Audi	Q5	VGA 70	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	Q5	VGA 16	3.0	6
Hybrid; ErrY		2015 Volkswage	Audi	Q5 Hybrid	VGA 63	2.0	4
Diesel;		2015 Volkswagen	Audi Group of	Q7	VGA 12	3.0	6
		2015 Volkswagen	Audi Group of	Q7	VGA 51	3.0	6
		2015 Volkswagen	Audi Group of	R8	VGA 27	4.2	8
		2015 Volkswagen	Audi Group of	R8	VGA 29	4.2	8
		2015 Volkswagen	Audi Group of	R8	VGA 35	5.2	10
		2015 Volkswagen	Audi Group of	R8	VGA 33	5.2	10
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 26	4.2	8
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 28	4.2	8
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 34	5.2	10
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 32	5.2	10
		2015 Volkswagen	Audi Group of	RS5	VGA 30	4.2	8
		2015 Volkswagen	Audi Group of	RS5 Cabriolet	VGA 31	4.2	8
		2015 Volkswagen	Audi Group of	RS7	VGA 21	4.0	8
Error- incrtY		2015 Volkswage	Audi	S3	VGA 42	2.0	4
		2015 Volkswagen	Audi Group of	S4	VGA 73	3.0	6
		2015 Volkswagen	Audi Group of	S4	VGA 76	3.0	6
		2015 Volkswagen	Audi Group of	S5	VGA 74	3.0	6
		2015 Volkswagen	Audi Group of	S5	VGA 77	3.0	6
		2015 Volkswagen	Audi Group of	S5 Cabriolet	VGA 75	3.0	6
		2015 Volkswagen	Audi Group of	S6	VGA 20	4.0	8
		2015 Volkswagen	Audi Group of	S7	VGA 19	4.0	8
		2015 Volkswagen	Audi Group of	S8	VGA 9	4.0	8

	2015	Volkswagen Group of	SQ5	VGA	69	3.0	6	
	2015	Volkswagen Group of	TT Coupe quattro	VGA	2	2.0	4	
	2015	Volkswagen Group of	TT Roadster quattro	VGA	3	2.0	4	
	2015	Volkswagen Group of	Continental GT	VGA	24	4.0	8	
	2015	Volkswagen Group of	Continental GT	VGA	43	6.0	12	
	2015	Volkswagen Group of	Continental GT Convertible	VGA	22	4.0	8	
	2015	Volkswagen Group of	Continental GT Convertible	VGA	45	6.0	12	
	2015	Volkswagen Group of	Flying Spur	VGA	23	4.0	8	
	2015	Volkswagen Group of	Flying Spur	VGA	44	6.0	12	
	2015	Volkswagen Group of	Mulsanne	VGA	61	6.8	8	
	2015	Volkswagen Group of	Veyron	VGA	60	8.0	16	
	2015	Volkswagen Group of	Aventador Coupe	VGA	52	6.5	12	
	2015	Volkswagen Group of	Aventador Roadster	VGA	53	6.5	12	
	2015	Volkswagen Group of	Huracan	VGA	25	5.2	10	
	2015	Volkswagen Lamborghini	Veneno Roadster	VGA	54	6.5	12	
	2015	Volkswagen Volkswagen	Beetle	VGA	79	1.8	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	78	1.8	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	81	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	95	2.0	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	83	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	91	2.0	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	80	1.8	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	82	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	96	2.0	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	84	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	92	2.0	4	
	2015	Volkswagen Volkswagen	CC	VGA	58	2.0	4	
	2015	Volkswagen Volkswagen	CC	VGA	59	2.0	4	
	2015	Volkswagen Volkswagen	CC 4Motion	VGA	56	3.6	6	
	2015	Volkswagen Volkswagen	Eos	VGA	36	2.0	4	
	2015	Volkswagen Volkswagen	Golf	VGA	103	1.8	4	
	2015	Volkswagen Volkswagen	Golf	VGA	85	1.8	4	
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	100	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	104	2.0	4	
	2015	Volkswagen Volkswagen	GTI	VGA	1	2.0	4	
	2015	Volkswagen Volkswagen	GTI	VGA	8	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	98	1.8	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	97	1.8	4	
Error in anY	2015	VolkswageVolkswage	Jetta	VGA	93	2.0	4	
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	2015	Volkswagen Volkswagen	Jetta	VGA	99	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	86	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	105	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	94	2.0	4	
	2015	Volkswagen Volkswagen	Passat	VGA	90	1.8	4	
	2015	Volkswagen Volkswagen	Passat	VGA	88	1.8	4	
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	89	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	87	2.0	4	
	2015	Volkswagen Volkswagen	Passat	VGA	55	3.6	6	
	2015	Volkswagen Volkswagen	Tiguan	VGA	39	2.0	4	
	2015	Volkswagen Volkswagen	Tiguan 4Motion	VGA	38	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Touareg	VGA	13	3.0	6	
	2015	Volkswagen Volkswagen	Touareg	VGA	57	3.6	6	

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	31	43	36				41.0359	61.6186	48.2955
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	22	31	25				27.4000	43.0000	32.7460
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
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Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
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Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	16	27	19				19.1000	35.3000	24.0710
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Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995

e. Verify as needed.

Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
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Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S7)	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S6)	31	41	34	40.2000	57.8000	46.5830
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S6)	30	40	34	39.7000	56.5000	45.8327
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(S6)	25	36	29	32.5000	51.1000	38.8661
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	31	43	36	41.0359	61.6186	48.2955
Manual(M6)	31	45	36	40.4000	65.2000	48.7432
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(S6)	25	37	30	32.7401	52.6000	39.4414
Manual(M5)	25	37	29	32.3787	52.4790	39.1216
Auto(AM-S	24	32	27	29.5595	44.4600	34.8093
Auto(AM-S6)	31	45	36	41.3000	64.1000	49.1703
Auto(S6)	23	34	26	28.7000	47.5000	34.9193
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Manual(M6)	31	46	36	40.2000	65.6000	48.6823
Manual(M6)	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M5)	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S6)	30	42	34	38.7000	59.8000	46.0046
Manual(M6)	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
31.1996	43.0359	35.6064		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
21.5783	30.5883	24.8755		TC	Turbocharg	SA	Semi-Auto	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
19.8843	28.2637	22.9455		TC	Turbocharged	SA	Semi-Automatic	8	
21.5783	30.5883	24.8755		TC	Turbocharg	SA	Semi-Auto	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8	
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8	
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8	
13.8358	21.9706	16.6020	G	NA	Naturally A	SA	Semi-Auto	8	
21.0646	27.9892	23.7037		TC	Turbocharged	SA	Semi-Automatic	8	
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6	
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6	
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8	
17.8443	25.5746	20.6536		SC	Supercharg	SA	Semi-Auto	8	
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8	
24.0075	29.7936	26.3065		TC	Turbocharg	SA	Semi-Auto	8	
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8	
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
15.5443	26.5587	19.1108		TC	Turbocharged	SA	Semi-Automatic	8	
23.1833	30.7065	26.0560		TC	Turbocharg	AMS	Automated	6	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8	

16.7285	23.6581	19.2682	SC	Supercharged	SAM	Semi-Automatic	8
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	SAM	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	SAM	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SAM	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SAM	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SAM	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SAM	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	SAM	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
9.7957	16.2453	11.9264	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
14.0224	20.0427	16.2140	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G NA	Naturally A	AMS	Automated	7
24.7637	32.6943	27.7980	TC	Turbocharged	SAM	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	MM	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.6516	40.5292	34.4273	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MM	Manual	6
30.5143	40.5292	34.3319	TC	Turbocharged	MM	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	SAM	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.3081	39.6674	33.9083	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MM	Manual	6
29.6183	40.1317	33.5766	TC	Turbocharged	MM	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	MM	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	SAM	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
25.2640	36.0643	29.1989	TC	Turbocharged	SAM	Semi-Automatic	6
25.3353	37.0021	29.5244	TC	Turbocharged	MM	Manual	5
31.1996	43.0359	35.6064	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.7888	45.3939	36.0012	TC	Turbocharged	MM	Manual	6
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	MM	Manual	6
25.4066	37.0689	29.5967	TC	Turbocharged	SAM	Semi-Automatic	6
25.1926	37.0021	29.4176	TC	Turbocharged	MM	Manual	5
23.5744	31.8670	26.7012	TC	Turbochar	AMS	Automated	6
31.4045	44.6752	36.2501	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.5269	33.6412	26.4608	NA	Naturally Aspirated	SAM	Semi-Automatic	6
24.6629	33.9684	28.1307	NA	Naturally Aspirated	MM	Manual	5
30.6516	45.6549	35.9711	TC	Turbocharged	MM	Manual	6
22.8950	32.6159	26.4413	TC	Turbocharged	MM	Manual	6
24.3335	35.7288	28.4112	TC	Turbocharged	SAM	Semi-Automatic	6
24.1899	35.2585	28.1693	TC	Turbocharged	MM	Manual	5
29.6183	41.8508	34.1040	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
29.8256	43.5614	34.7575	TC	Turbocharged	MM	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	SAM	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SAM	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SAM	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	SAM	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	FVGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t	0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.	0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.	(	85	422	GP	Gasoline (I
N	N	A	All Wheel Drive	FVGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.	0AUF	85	389	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.	(	85	422	GP	Gasoline (I
N	N	A	All Wheel Drive	FVGAV02.	0AUB	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.		15		GP	Gasoline (I
Y	N	A	All Wheel Drive	FVGAJ02.	0AUF	85	406	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02t	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.	0AUF	85	455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	(	15		GP	Gasoline (I
Y	N	A	All Wheel Drive	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT02.		15		GP	Gasoline (I
Y	N	A	All Wheel Drive	FVGAT03.	0NU3		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.	0ALT	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel Drive	FVGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel Drive	FVGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel Drive	FVGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel Drive	FVGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	0NUA	15		GP	Gasoline (Premium
tomated Manual with paddles)		A	All Wheel Drive	FVGAV02.		15		GP	Gasoline (I
Y	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
N	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
N	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.	0NUA	15		GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAJ03.0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	10		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.	15		GP	Gasoline (I
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Fuel Unit Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG (Unleaded Recommended)	Not exempt				86	12		
MPG (15 ppm, max gallon)	Not exempt				86	12		
MPG (Unleaded Recommended)	Not exempt	79	10					
MPG (Unleaded Recommended)	Not exempt	79	10					
MPG (Unleaded Recommended)	Not exempt				86	10		
MPG (Unleaded Recommended)	Not exempt				91	12		
MPG (Unleaded Recommended)	Not exempt				91	12		
MPG (Unleaded Recommended)	Not exempt				91	12		
MPG (Unleaded Recommended)	Not exempt	81	10					
MPG (Unleaded Recommended)	Not exemp	84	12					
MPG (Unleaded Recommended)	Not exempt	84	12					
MPG (Unleaded Recommended)	Not exempt				98	16		
MPG (Unleaded Recommended)	Not exempt				98	16		
MPG (Unleaded Recommended)	Not exempt				98	16		
MPG (15 ppm, max gallon)	Not exempt				98	16		
MPG (Unleaded Recommended)	Not exempt						94	25
MPG (15 ppm, max gallon)	Not exempt						94	25
MPG (Unleaded Recommended)	Not exempt				100	15		
MPG (Unleaded Recommended)	Not exempt				100	15		
MPG (15 ppm, max gallon)	Not exempt				107	15		
MPG (Unleaded Recommended)	Not exempt				107	15		
MPG (Unleaded Recommended)	Not exempt				107	15		
MPG (Unleaded Recommended)	Not exempt				107	15		
MPG (Unleaded Recommended)	Not exempt				90	28		
MPG (Unleaded Recommended)	Not exempt						84	17
MPG (Unleaded Recommended)	Not exempt						84	17
MPG (Unleaded Recommended)	Truck							
MPG (Unleaded Recommended)	Truck							
MPG (15 ppm, max gallon)	Truck							
MPG (Unleaded Recommended)	Truck							
MPG (15 ppm, max gallon)	Truck							
MPG (Unleaded Recommended)	Truck							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt							
MPG (Unleaded Recommended)	Not exempt	84	13					
MPG (Unleaded Recommended)	Not exempt	81	10					
MPG (Unleaded Recommended)	Not exempt						94	25
MPG (15 ppm, max gallon)	Not exempt				86	10		
MPG (Unleaded Recommended)	Not exempt				90	13		
MPG (Unleaded Recommended)	Not exempt				90	13		
MPG (Unleaded Recommended)	Not exempt	84	13					
MPG (Unleaded Recommended)	Not exempt	84	13					
MPG (Unleaded Recommended)	Not exempt	81	10					
MPG (Unleaded Recommended)	Not exempt				98	16		
MPG (Unleaded Recommended)	Not exempt						94	25
MPG (Unleaded Recommended)	Not exempt				100	15		

MRG Unleaded Recommended)	miles per gallon	Truck						
MRG Unleaded Recommended)	miles per gallon	Not exempt	74	13				
MRG Unleaded Recommended)	miles per gallon	Not exempt						
MRG Unleaded Recommended)	miles per gallon	Not exempt	89	11				
MRG Unleaded Recommended)	miles per gallon	Not exempt	89	11				
MRG Unleaded Recommended)	miles per gallon	Not exempt	86	7				
MRG Unleaded Recommended)	miles per gallon	Not exempt	86	7				
MRG Unleaded Recommended)	miles per gallon	Not exempt	102	13				
MRG Unleaded Recommended)	miles per gallon	Not exempt	102	13				
MRG Unleaded Recommended)	miles per gallon	Not exempt			101	11		
MRG Unleaded Required)	miles per gallon	Not exempt						
MRG Unleaded Required)	miles per gallon	Not exempt						
MRG Unleaded Required)	miles per gallon	Not exempt						
MRG Unleaded Required)	miles per gallon	Not exempt						
MRG Unleaded Required)	miles per gallon	Not exempt						
MRG Unleaded Recommended)	miles per gallon	Not exempt					85	15
MRG Unleaded Recommended)	miles per gallon	Not exempt					85	15
MRG Unleaded Recommended)	miles per gallon	Not exempt					85	15
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt					85	15
MRG Unleaded Recommended)	miles per gallon	Not exempt					85	15
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt					85	15
MRG Unleaded Recommended)	miles per gallon	Not exempt	81	7				
MRG Unleaded Recommended)	miles per gallon	Not exempt	81	7				
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt	81	7				
MRG Unleaded Recommended)	miles per gallon	Not exempt	81	7				
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt	81	7				
MRG Unleaded Recommended)	miles per gallon	Not exempt	94	13				
MRG Unleaded Recommended)	miles per gallon	Not exempt	94	13				
MRG Unleaded Recommended)	miles per gallon	Not exempt	94	13				
MRG Unleaded Recommended)	miles per gallon	Not exempt	77	11				
MRG Unleaded Recommended)	miles per gallon	Not exempt					93	16
MRG Unleaded Recommended)	miles per gallon	Not exempt					93	16
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt					93	16
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt					93	16
MRG Unleaded Recommended)	miles per gallon	Not exempt					93	16
MRG Unleaded Recommended)	miles per gallon	Not exempt					93	16
MRG Unleaded Recommended)	miles per gallon	Not exempt			94	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			94	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			94	16		
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt			94	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			94	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			94	16		
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt			94	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			94	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			102	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			102	16		
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt			102	16		
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Not exempt			102	16		
MRG Unleaded Recommended)	miles per gallon	Not exempt			102	16		
MRG Unleaded Recommended)	miles per gallon	Truck						
MRG Unleaded Recommended)	miles per gallon	Truck						
MRG Unleaded (15 ppm, max gallon)	miles per gallon	Truck						
MRG Unleaded Recommended)	miles per gallon	Truck						

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
1550	1550	hwy label value correction							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	eng code c	15	22	18			19.5	
2200	2200								
2500	2500	eng code correction	14	20	16			17.4	
2300	2300	eng code c	15	22	18			19.5	
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350								
2400	2400	manuf confirmatory tests update	15	21	17			19.2	
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16			17.4	
2700	2700								
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3000	3000	highway & combined values corrected, maximum ethanol corrected							
2200	2200								
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							

3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
3550	3550	Release date change			
4400	4400	corrected carline to Veneno Roadster 477			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1800	1800				
1750	1750				
1550	1550	hwy label value corrected			
1550	1550				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1750	1750				
1800	1800	fuel consumption and CO2 unadj unrounded corrected			
2100	2100				
1550	1550	release date change			
2000	2000				
1900	1900				
1550	1550				
2200	2200				
1900	1900	rounded adjusted highway CO2 rounding error corrected			
1900	1900				
1650	1650	EPA confirmatory tests numbers for city highway US06 now included, no label value changes			
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

Hwy2 Unit	Comb2	Cmb2 Unit	Hwy2	Unit	Cmb2 Unit	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
SB.										
on changed to #1 for 1.8L engine code CNSB										
L engine code CNTC.										
ed to #2 for 2.0L engine code CNTC, GHG rating corrected										
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E	MPG	miles per g	
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E	MPG	miles per gallon	
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E	MPG	miles per g	
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E	MPG	miles per gallon	
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E	MPG	miles per gallon	

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Fuel2 Alt	City CO2	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
					SIDI;	2	23	Subcompact Cars	
						2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	24	Compact Cars	
2600	400	281	347	2600	SIDI; FFV;	2	24	Compact C	
					SIDI;	2	24	Compact Cars	
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompact Cars	
2600	400	281	347	2600	SIDI; FFV;	2	23	Subcompa	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	26	Large Cars	
					SIDI;	2	26	Large Cars	
					SIDI;	2	26	Large Cars	
					SIDI;	2	26	Large Cars	
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Station Wag	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD	
					SIDI;	2	231	Small SUV 4WD	
						2	231	Small SUV 4WD	
					SIDI;	2	231	Small SUV 4WD	
						2	233	Standard SUV 4W	
					SIDI;	2	233	Standard SUV 4W	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	23	Subcompa	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	

					SIDI;	2	231	Small SUV 4WD
or engine code CDMA and all TT models.					SIDI;	2	23	Subcompact Cars
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seaters
						2	21	Two Seaters
					SIDI & PFI;	2	21	Two Seaters
						2	21	Two Seate
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact C
						2	24	Compact Cars
						1	14	Compact Cars
						1	14	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
						2	25	Midsize Cars
						2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

Car/Truck	Calc Appr	Sales Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	2/25/2014	16011	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16483		N	N		
car	Vehicle Specific 5-cycle	6/2/2014	16013		N	N		
car	Vehicle Specific 5-cycle	6/2/2014	16012		N	N		
car	Vehicle Specific 5-cycle	1/15/2014	16197		N	N		
car	Derived 5-cycle label	6/9/2014	15670		N	N		
car	Derived 5-cycle label	6/9/2014	16311		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15675		N	N		
car	Derived 5-cycle label	6/9/2014	16313		N	N		
car	Derived 5-cycle label	6/9/2014	16312		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15676		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15673		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15674		N	N		
car	Derived 5-cycle label	6/9/2014	16062		N	N		
car	Vehicle Specific 5-cycle	6/10/2014	15458		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16061		N	N		
car	Vehicle Specific 5-cycle	6/10/2014	15459		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15647		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15385		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15456		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15648		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15386		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15442		N	N		
cars	Derived 5-cycle label	6/9/2014	16637		N	N		
car	Derived 5-cycle label	8/4/2014	16057		N	N		
car	Vehicle Specific 5-cycle	8/4/2014	15650		N	N		
	Derived 5-cycle label	6/9/2014	16034		N	N		
	Vehicle Specific 5-cycle	6/9/2014	16060		N	N		
	Vehicle Specific 5-cycle	6/10/2014	15460		N	N		
	Vehicle Specific 5-cycle	6/9/2014	15999		N	N		
D	Vehicle Specific 5-cycle	6/2/2014	15408		N	N		
D	Derived 5-cycle label	6/9/2014	15711		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15493		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15497		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15601		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15598		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15492		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15496		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15600		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15597		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15589		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	15590		N	N		
car	Vehicle Specific 5-cycle	6/2/2014	15577		N	N		
car	Vehicle Specific 5-cycle	8/4/2014	15651		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16064		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16067		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16065		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16068		N	N		
car	Vehicle Specific 5-cycle	6/9/2014	16066		N	N		
car	Vehicle Specific 5-cycle	6/2/2014	15576		N	N		
car	Vehicle Specific 5-cycle	6/2/2014	15575		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15400		N	N		

	Vehicle Specific 5-cycle label	6/9/2014	16059	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15681	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	16523	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Derived 5-cycle label	8/25/2014	16388	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	8/25/2014	16339	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Derived 5-cycle label	8/25/2014	16389	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Derived 5-cycle label	8/25/2014	16340	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16492	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Derived 5-cycle label	7/28/2014	16482	N	N
car	Derived 5-cycle label	7/28/2014	16533	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Derived 5-cycle label	8/25/2014	16429	N	N
car	Derived 5-cycle label	8/25/2014	16468	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16380	N	N
car	Derived 5-cycle label	8/4/2014	16485	N	N
car	Derived 5-cycle label	8/25/2014	16450	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	N	N
car	Derived 5-cycle label	7/28/2014	16534	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16381	N	N
car	Derived 5-cycle label	7/14/2014	16393	N	N
car	Derived 5-cycle label	7/14/2014	16273	N	N
car	Derived 5-cycle label	7/14/2014	16449	N	N
car	Derived 5-cycle label	7/28/2014	16283	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	N	N
	Derived 5-cycle label	7/14/2014	15612	N	N
	Derived 5-cycle label	7/14/2014	15611	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	N	N
D	Derived 5-cycle label	8/1/2014	15688	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	CRUA = Audi A3, VW	N	Golf, Jetta Engine Co	N	de CVCA = VW Passat, Beetle, Beetle C	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Co	N		Y		CONTINU	Y	AUDI VAL
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Co	N		Y		CONTINU	Y	AUDI VAL
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Co	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	Y	CTGA. A8	D/A	ctivation of cylinder	Y	1, 2, 3, 5, 7 and 8	Y
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Co	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	Y	CTGA. A8	D/A	ctivation of cylinder	Y	1, 2, 3, 5, 7 and 8	Y
N	N	Engine Co	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Co	N		Y		CONTINU	Y	AUDI VAL
N	N		N		N		N		
N	N	Engine Co	N		Y		CONTINU	Y	AUDI VAL Battery(s)
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y		Continuously	Y	intake and exhaust cam adjustment
N	N	Engine Code	N	: CFS	Y		Continuously	Y	intake and exhaust cam adjustment
N	N	Engine Code	Y	CRDB (RST	D/A	ctivation of cylinder	Y	1, 2, 3, 5, 7 and 8	Y
N	N	Engine Co	N		Y		CONTINU	Y	Audi Valve
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	Y	CEUC. S6/S7	D/A	ctivation of cylinder	Y	1, 2, 3, 5, 7 and 8	Y
N	N	Engine Code	Y	CEUC. S6/S7	D/A	ctivation of cylinder	Y	1, 2, 3, 5, 7 and 8	Y
N	N	Engine Code	Y	CYCA. 6	D/A	ctivation of cylinder	Y	1, 2, 3, 5, 7 and 8	Y

| | | |

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									

onv.

alves to increase lift before the valves are opened, and to increase lift before ignition for cylinder deactivation as described

alves to increase lift before the valves are opened, and to increase lift before ignition for cylinder deactivation as described
tolled and hydraulically adjusted.

1	Lithium Ion	266	5.00	37.0	On-Board

EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves to increase lift before the valves are opened, and to increase lift before ignition for cylinder deactivation as described
t valves only

alves to increase lift before the valves are opened, and to increase lift before ignition for cylinder deactivation as described
alves to increase lift before the valves are opened, and to increase lift before ignition for cylinder deactivation as described
alves to increase lift before the valves are opened, and to increase lift before ignition for cylinder deactivation as described

alves on a single camshaft. The first valve lift profile (full valve lift) is designed for the second injection and ignition for cylinder deactivation as described
ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile (full valve lift) is designed for the second injection and ignition for cylinder deactivation as described
ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile (full valve lift) is designed for the second injection and ignition for cylinder deactivation as described
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.
ECHANICAL-HYDRAULIC
ONTINUOUSLY VVT
ONTINUOUSLY VVT
ECHANICAL-HYDRAULIC
ONTINUOUSLY VVT
AMS
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onv.
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onv.
controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

onv.
onv.

AMS
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onv.

onv.
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onv.
onv.

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

est above 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W40 VW 50501
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
		40		GDI	Spark Ignit	N	N	N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
h				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /

	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40
	GDI	Spark Ignition Direct Injection	N	5W40
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
h	GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
	MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
	MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
	MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
	GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
	MFI	Multipoint/s	N	5W30 VW
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignit	N	5W40 VW
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
	MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
	CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
	GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500	No	Auto(AM-S7)	Auto(AM-S7)					
N	50500	No	Manual(M6)	Manual(M6)					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	50500	No	Auto(AM-S7)	Auto(AM-S7)					
N	50500	No	Manual(M6)	Manual(M6)					
N	50700	No	Auto(AM-S7)	Auto(AM-S7)					
N	50700	No	Auto(AM-S7)	Auto(AM-S7)					
N	50700	No	Auto(S8)	Auto(S8)					
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	50700	No	Auto(AM-S7)	Auto(AM-S7)					
N	50700	No	Auto(AM-S7)	Auto(AM-S7)					
N	50700	No	Auto(S8)	Auto(S8)					

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S	Auto(AM-S	VENENO
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Jetta Base
N	No	Manual(M5)	Manual(M5)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[illegible]	EPA Calculated Gas G	[illegible]	[illegible] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.0APA	9		
48.3	[redacted]	8	8	FVGAV02.0VAL	5		
36.2	[redacted]	7	7	FVGAV02.0APA	9		
34.3	[redacted]	6	6	FVGAV02.0APA	9		
35.2	[redacted]	7	7	FVGAV02.0APA	9		
35.4	[redacted]	7	7	FVGAV02.0AUB	5		
32.7	[redacted]	6	6	FVGAJ02.(	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
30.1	[redacted]	5	5	FVGAJ02.0AUF	5		
32.7	[redacted]	6	6	FVGAJ02.(	5		
33.1	[redacted]	6	6	FVGAV02.0AUB	5		
36.9	[redacted]	7	7	FVGAV02.0AUB	5		
30.0	[redacted]	5	5	FVGAV02.0AUB	5		
28.1	[redacted]	5	5	FVGAJ03.0AUD	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
27.9	[redacted]	5	5	FVGAJ03.0AUD	5		
37.7	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
28.0	[redacted]	5	5	FVGAV04.0NUA	5		
36.9	[redacted]	7	6	FVGAJ03.0NU4	5		
28.8	[redacted]	5	5	FVGAV03.0AUE	5		
27.6	[redacted]	5	5	FVGAV04.0NUA	5		
21.1	[redacted]	4	4	FVGAV06.	5		
31.2	[redacted]	6	6	FVGAJ02.0AUF	5		
30.0	[redacted]	5	5	FVGAV02.0AUA	5		
29.5	[redacted]	5	5	FVGAV02.0AUA	5		
29.6	[redacted]	5	5	FVGAJ02.0AUF	5		
27.2	[redacted]	5	5	FVGAJ03.(	5		
34.3	[redacted]	7	5	FVGAJ03.0NU4	5		
34.0	[redacted]	6	6	FVGAT02.	5		
28.1	[redacted]	5	4	FVGAT03.0NU3	5		
23.1	[redacted]	4	4	FVGAT03.0ALT	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
20.7	[redacted]	4	4	FVGAV04.2NLC	5		
17.2	[redacted]	2	2	FVGAV04.2NLC	5		
19.6	[redacted]	3	3	FVGAV05.2NLD	5		
17.0	[redacted]	2	2	FVGAV05.2NLD	5		
22.8	[redacted]	4	4	FVGAV04.2NLB	5		
22.6	[redacted]	4	4	FVGAV04.2NLB	5		
24.1	[redacted]	4	4	FVGAV04.0NUA	5		
33.2	[redacted]	6	6	FVGAV02.	5		
26.9	[redacted]	5	5	FVGAJ03.0AUD	5		
23.5	[redacted]	5	5	FVGAJ03.0AUD	5		
26.9	[redacted]	5	5	FVGAJ03.0AUD	5		
23.5	[redacted]	5	5	FVGAJ03.0AUD	5		
26.4	[redacted]	5	5	FVGAJ03.0AUD	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.4	[redacted]	5	5	FVGAV04.0NUA	5		
25.0	[redacted]	5	5	FVGAV04.0NUA	5		

24.9	[redacted]	4	4 FVGAJ03.0AUD	5
33.3		6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.5LLR	5
14.6		1	1 FVGAV06.5LLR	5
20.0		3	3 FVGAV05.2NLE	5
15.8		1	1 FVGAV06.	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
46.6		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
46.4		8	7 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
45.8		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
45.3		8	7 FVGAV02.0VAL	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
38.9		7	7 FVGAV02.0APA	9
39.3		7	7 FVGAV02.0APA	9
48.3		8	8 FVGAV02.0VAL	5
48.7		8	8 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
39.4		7	7 FVGAV02.0VPD	7
38.4		7	7 FVGAV02.0VPD	7
34.8		7	7 FVGAV02.	7
49.2		8	8 FVGAV02.0VAL	5
34.9		6	6 FVGAV02.0VUC	5
35.9		7	7 FVGAV02.0VUC	5
48.7		8	8 FVGAV02.0VAL	5
34.0		6	6 FVGAV02.0VPD	7
37.7		7	7 FVGAV02.0VPD	7
37.3		7	7 FVGAV02.0VPD	7
46.2		8	7 FVGAV02.0VAL	5
46.9		8	7 FVGAV02.0VAL	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

| | | |

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	3250		326	236	285			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		1000	410	290	356			
	0		398	277	343			
		1500	446	314	386			
		1000	410	290	356			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5250	640	403	534			
		1000	420	317	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2000	496	347	429			
	500		430	328	385			
		0	369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4000	573	336	466			
		0	381	289	340			
		2500	488	321	413			
		3250	519	341	439			
		2500	488	321	413			
		3250	519	341	439			
		2500	500	341	428			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			

	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	6750	629	441	544
	11000	831	523	692
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
3250		331	224	283
750		358	271	319
750		355	258	311
2250		347	238	298
2000		351	239	301
1000		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
3250		332	223	283
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5	
247.7	165.1	210.5	325.6	236.3	285.4	
289.0	188.0	243.6	362.1	255.5	314.1	
305.0	200.0	257.8	378.6	280.1	334.3	
294.0	198.0	250.8	366.0	271.0	323.2	
292.0	199.0	250.2	373.7	280.2	331.6	
323.0	206.0	270.4	410.3	289.6	356.0	
321.2	202.4	267.7	398.0	276.6	343.4	
353.0	224.0	295.0	445.7	313.9	386.4	
323.0	206.0	270.4	410.3	289.6	356.0	
321.2	202.4	267.7	398.0	276.6	343.4	
282.0	189.0	240.2	360.0	272.0	320.4	
358.0	219.0	295.4	452.0	306.0	386.3	
383.5	233.0	315.8	481.7	326.0	411.6	
331.0	194.0	269.4	415.7	267.3	348.9	
385.0	236.0	318.0	492.9	320.9	415.6	
331.0	194.0	269.4	415.7	267.3	348.9	
376.5	225.0	308.3	473.4	302.9	396.7	
391.0	224.0	315.9	483.9	299.0	400.7	
339.0	198.0	275.6	425.6	280.1	360.1	
376.5	225.0	308.3	473.4	302.9	396.7	
396.0	226.0	319.5	492.3	309.7	410.1	
515.0	310.0	422.8	640.3	403.3	533.6	
331.0	226.0	283.8	419.7	316.6	373.3	
357.5	223.0	297.0	451.0	312.5	388.7	
357.0	230.0	299.9	445.6	315.7	387.1	
358.0	230.0	300.4	451.6	321.9	393.2	
390.0	251.0	327.4	496.0	347.0	429.0	
348.0	231.0	295.4	430.5	328.5	384.6	
380.0	223.0	309.4	369.0	298.0	337.0	
446.0	260.0	362.3	541.0	369.0	463.6	
458.0	295.0	384.6	569.6	409.5	497.6	
540.6	299.8	432.3	656.3	394.3	538.4	
651.3	362.7	521.4	771.6	439.1	622.0	
577.0	309.4	456.6	685.6	400.2	557.2	
646.3	377.5	525.3	753.1	454.0	618.5	
540.6	299.8	432.3	656.3	394.3	538.4	
651.3	362.7	521.4	771.6	439.1	622.0	
577.0	309.4	456.6	685.6	400.2	557.2	
646.3	377.5	525.3	753.1	454.0	618.5	
466.0	296.0	389.5	562.0	379.0	479.6	
463.0	307.0	392.8	558.0	398.0	486.0	
467.0	253.0	370.7	573.0	336.1	466.4	
311.0	214.0	267.4	381.4	289.2	339.9	
396.0	248.0	329.4	488.0	321.0	412.8	
443.0	266.0	363.4	519.0	341.0	438.9	
396.0	248.0	329.4	488.0	321.0	412.8	
443.0	266.0	363.4	519.0	341.0	438.9	
401.0	256.0	335.8	500.0	341.0	428.4	
427.7	252.5	348.9	530.7	330.5	440.6	
427.7	252.5	348.9	530.7	330.5	440.6	
444.0	243.0	353.6	534.0	330.6	442.5	

427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
708.0	392.0	565.8	831.0	523.0	692.4
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
252.0	156.0	208.8	330.7	224.1	282.7
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3
272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
253.0	155.0	208.9	331.8	222.7	282.7
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
N	3.7	3.7			
N	2.8	2.8			
N	3.6	3.6			
N	3.8	3.8			
N	3.7	3.7			
N	3.7	3.7			
N	4.0	4.0			
N	3.8	3.8			
N	4.3	4.3			
N	4.0	4.0			
N	3.8	3.8			
N	3.6	3.6			
N	4.3	4.3			
N	4.5	4.5			
N	3.4	3.4			
N	4.8	4.8			
N	3.4	3.4			
N	4.5	4.5			
N	4.5	4.5			
N	3.6	3.6			
N	4.5	4.5			
N	4.5	4.5			
N	5.9	5.9			
N	4.2	4.2			
N	4.3	4.3			
N	4.3	4.3			
N	4.3	4.3			
N	4.8	4.8			
N	3.7	3.7			
N	3.8	3.8			
N	4.5	4.5			
N	5.6	5.6			
N	5.9	5.9			
N	7.1	7.1			
N	6.2	6.2			
N	7.1	7.1			
N	5.9	5.9			
N	7.1	7.1			
N	6.2	6.2			
N	7.1	7.1			
N	5.6	5.6			
N	5.6	5.6			
N	5.3	5.3			
N	3.8	3.8			
N	4.8	4.8			
N	5.0	5.0			
N	4.8	4.8			
N	5.0	5.0			
N	4.8	4.8			
N	5.0	5.0			
N	5.0	5.0			
N	5.0	5.0			

N	5.3	5.3
N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	8.3	8.3
N	6.2	6.2
N	7.7	7.7
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	3.7	3.7
N	4.0	4.0
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.4	3.4
N	3.3	3.3
N	2.8	2.8
N	2.8	2.8
N	3.6	3.6
N	3.6	3.6
N	3.3	3.3
N	3.4	3.4
N	3.7	3.7
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

EPA_UNRD

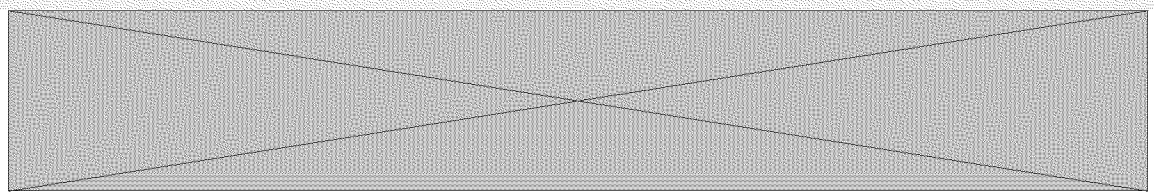
| [redacted] | [redacted] | [redacted] |

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

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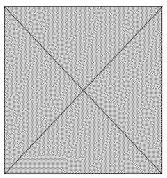
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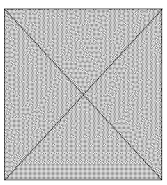
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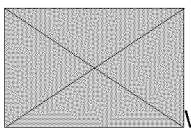
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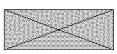
Jul 26, 2014 01:00 pm | feedback@highgearmedia.com (John Voelcker)



What's the new Harley electric motorcycle concept like to ride? And why did Tesla stop building its Model S electric sedan? This is the Week In Reverse for Friday, July 25, 2014, right here at Green Car Reports. Our writer Ben Rich was able to take a test ride on the Harley-Davidson Livewire electric motorcycle concept. The company's been touring...

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Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 7/28/2014 11:22:01 AM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Hi Dave;

Thanks for your phone message and mail. I made corrections to six label indexes in Verify to set the five year fuel savings or spending to the correct values. Two of those cases were flagged because I used a zero value for the spending field instead of zero in the fuel savings field. In our case, all values used on fuel economy labels were correct and on the Monroney labels used in the field. No incorrect fuel economy labels were used on port released vehicles.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, July 25, 2014 7:47 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Attached are the data in Verify as of July 23, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

Note: The macro hadn't been double checking your 5 year fuel costs previously. I corrected the macro

today. It did pick up a few errors, but most manufacturers had calculated the 5-year "You Save" or "You Spend" values correctly. Call me or email me if you need to discuss it a little. DOE doesn't use those values for www.fueleconomy.gov---they calculate their own values based on the weekly average fuel prices in the U.S.

The next normal posting of 2015 FE Label data will be on Aug 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

I'm out of the office on Monday but back on Tues (7/29).

Thanks

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Mon 7/28/2014 1:50:06 PM
Subject: RE: Notification of a new in-use class T132

Thanks for the notice, Tobias. We will schedule around your trip.

Have a good week!

Lynn

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Monday, July 28, 2014 9:21 AM
To: Sohacki, Lynn
Cc: Snyder, Jim
Subject: RE: Notification of a new in-use class T132

Hi Lynn !

Our mechanic and myself will be in Denver for the IUVP High altitude testing from August 4th to 16th.

Please schedule the Surveillance program around because we will not be able to check a car during that time.

Thank you

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Sohacki, Lynn [mailto:sohacki.lynn@epa.gov]
Sent: Tuesday, July 15, 2014 4:55 PM
To: Glas, Tobias
Subject: Notification of a new in-use class T132

Hi, Tobias.

This is a notification of an upcoming in-use class. Normally, I send an email like this out when a notification letter is sent to a manufacturer to announce an in-use class. However, due to a support staff mix-up, the letter wasn't sent last month when I drafted it. It is being edited and will be sent tomorrow.

Unfortunately, the procurement process has proceeded independently of the letter and we have one of the vehicles scheduled to be procured next week.

I apologize for the late notice of both the in-use class and the notification of the procurement of this vehicle. I am attaching to this email a draft version of the notification letter. A final version

will be mailed to Dennis and emailed to you. Because it has been so long, would you please confirm the mailing address?

The vehicle being brought in next week is:

Ex. 7 Wednesday) 0730 Vehicle Pick up_

Please fill out the attached parameter sheet and return it to me.

Our contractor, Jacobs, will be contacting you to schedule the maintenance. We have some flexibility in scheduleing the maintenance of the vehicle. I hope that we can find something to accommodate your schedule. If not, please call me and I'll see what I can do.

Again, I apologize for the confusion. Please call me if you have any questions.

Thank you,

Lynn Sohacki

Compliance Division

Environmental Protection Agency

734-214-4851

734-214-4869 fax

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Snyder, Jim
Sent: Mon 7/28/2014 2:48:50 PM
Subject: RE: Notification of a new in-use class T132

Tobias, any news about that customer with the car that won't communicate with the state's I/M? He sends me a note every day saying he hasn't been contacted by anyone.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Monday, July 28, 2014 9:21 AM
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United States of America

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Ex. 6 7/23/14 (Wednesday) 0730 Vehicle Pick-up

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Our contractor, Ex. 4 - CBI will be contacting you to schedule the maintenance. We have some flexibility in scheduleing the maintenance of the vehicle. I hope that we can find something to accommodate your schedule. If not, please call me and I'll see what I can do.

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Compliance Division

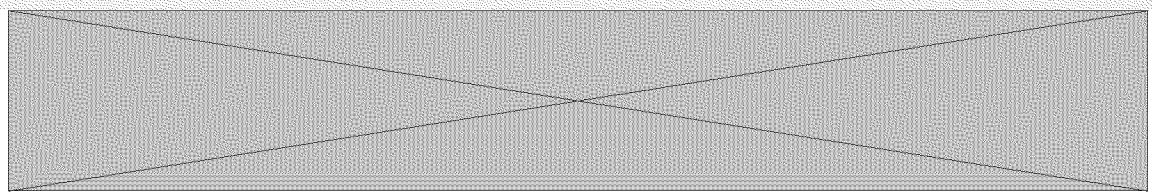
Environmental Protection Agency

734-214-4851

734-214-4869 fax

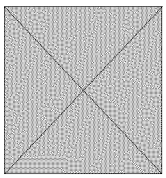
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Mon 7/28/2014 4:03:59 PM
Subject: Green Car Report Daily Headlines

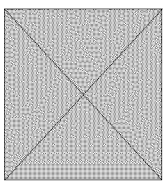
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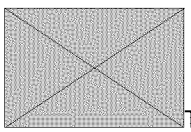
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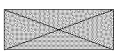
Toyota's Electric-Car Disdain, Honda Insight Update, Buying A Second Charging Cable: Today's Car News

Jul 28, 2014 03:26 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Decoding Toyota's disdain for electric cars, writer Antony Ingram updates us on his used 2001 Honda Insight, and how to buy a second charging cable for your plug-in electric car. All this and more on Green Car Reports. Catch up on last week's big stories with our Week in Reverse feature and video. A new lithium-ion...

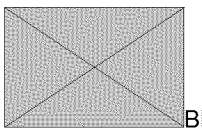
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BMW Launches Its Own DC Fast-Charging Station, Priced At $6,500

Jul 28, 2014 03:00 pm | feedback@highgearmedia.com (Antony Ingram)

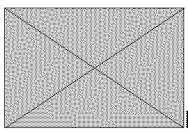
 BMW has launched a new range of DC fast chargers aimed at providing a convenient charging standard for drivers of its i3 electric cars. Developed in conjunction with Bosch, the BMW i DC fast chargers will allow i3 owners to charge their cars' batteries up to 80

percent in 30 minutes. MUST SEE: Decoding Toyota's Electric-Car Disdain: A Role For...

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Plug-In Electric Cars: How To Buy A Second Charging Cable

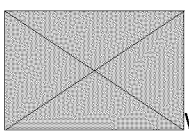
Jul 28, 2014 03:04 pm | feedback@highgearmedia.com (John Voelcker)

 If you own a plug-in electric car, what's the best (and cheapest) way to get a second charging cable to supplement the one that came with your vehicle? Turns out there are several options--as electric-car owners and advocates suggested when we asked the question. MUST SEE: Decoding Toyota's Electric-Car Disdain: A Role For Fuel Cells It all...

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Decoding Toyota's Electric-Car Disdain: A Role For Fuel Cells

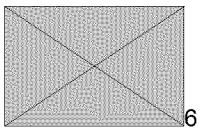
Jul 28, 2014 01:21 pm | feedback@highgearmedia.com (Matthew Klippenstein)

 While unveiling its fuel-cell vehicle last month–priced to undercut the Tesla Model S ever so slightly–Toyota's Global R&D Chief Mitsuhisa Kato offered some dismissive thoughts on battery-electric vehicles. As quoted in Automotive News, the 39-year veteran of the Toyota Motor Company said: "The cruising distance is so short for...

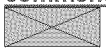
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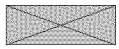
5,000 Miles In Our Used 2001 Honda Insight Hybrid

Jul 28, 2014 01:00 pm | feedback@highgearmedia.com (Antony Ingram)

 61 mpg. That's the figure everyone will want to know, so that's the one I'm starting with. 61 mpg is what I've managed so far from the 2001 Honda Insight I bought back in March, over a distance of more than 5,000 miles. That, for the record, is eight miles per gallon better than the figure buyers would have seen on the car's window sticker back in...

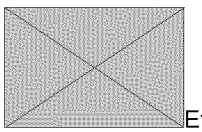
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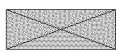
Audi SQ7 SUV Confirmed To Get Electric Turbocharger In 2016: UPDATE

Jul 28, 2014 12:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Efficiency-minded carmakers are turning to turbocharging in droves, but Audi may be about to do them one better. The German automaker will put an electric turbocharger into production, and now it has revealed more about its plans for that technology. According to a new report from Autocar, electric turbocharging will debut on the SQ7, a...

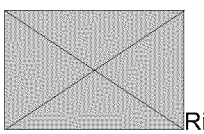
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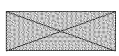
First RHD Tesla Model S Electric Cars In Asia Delivered In Hong Kong

Jul 28, 2014 11:36 am | feedback@highgearmedia.com (Antony Ingram)

 Right-hand drive Tesla Model S electric cars have already begun to trickle out in the United Kingdom, but now they're hitting the Asian markets too. The first Asian right-hand drive Model S have now been delivered to the first eight customers in Hong Kong. MUST SEE: Decoding Toyota's Electric-Car Disdain: A Role For Fuel Cells Coinciding with a...

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Menlo Park, CA 94025

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Update your profile

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 7/28/2014 6:45:38 PM
Subject: RE: VW Group - Lab Calculation Question

Bill, I've heard back from the lab and they agree with your assessment and are reprocessing the data. They looked further and so far only found it on the vw tests run 7/1 and 7/2 but are looking into it.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, July 17, 2014 3:19 PM
To: Snyder, Jim
Subject: RE: VW Group - Lab Calulation Question

Ok thanks and have a good weekend.

-Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 17, 2014 3:18 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

Okay I'll Look at this and then I'll have to take it up with the lab. I am off tomorrow and am trying to complete some cert reviews today so this won't get my attention until next week.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, July 17, 2014 3:14 PM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

Hi Jim,

The Verify data only includes the weighted IntTHC results derived from the Net Concentrations from each phase. I underlined the values in question in the attached lab print report that appear unadjusted for Ambient concentrations. The use of these numbers result in a weight IntTHC nearly 4-times higher than our results.

Regards,

Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 17, 2014 1:52 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: RE: VW Group - Lab Calulation Question

I'll have to look into it. Do you know if this is calculation is also done in Verify or is this upstream of Verify calculations. I ask because there are some calculations that Verify does independently and correctly that the lab does differently but aren't not used by Verify.

Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, July 17, 2014 1:44 PM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Reineke, Dennis (EEO)
Subject: VW Group - Lab Calulation Question

Hello Jim,

We have noticed what appears to be a discrepancy in recent THC calculations provided by your

lab. It appears for diesel concepts the lab is using Integrated THC without subtracting Ambient concentrations as referenced in the CFR40 86.144-94. For example test number 2014-0178-004 dated 7-2-2014, you will see that raw IntTHC was used for calculating the phase net concentrations, instead of an Ambient adjusted Net IntTHC.

Please let us know if which calculation procedure is correct.

Regards,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 7/28/2014 7:11:26 PM
Subject: RE: VW Group - Lab Calculation Question

Thanks Jim. I have also checked back through 2012 calendar year and haven't found an issue.

-Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, July 28, 2014 2:46 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group - Lab Calculation Question

Bill, I've heard back from the lab and they agree with your assessment and are reprocessing the data. They looked further and so far only found it on the Ex. 4 - CBI but are looking into it.

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Please let us know if which calculation procedure is correct.

Regards,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Mon 7/28/2014 7:28:04 PM
Subject: RE: EPA Scan Tool

Are you referring to the Certification confirmatory testing of new cars, or the in-use tests that Lynn Sohacki does?

The cert cars just get a quick code check by Ben Haynes. He uses a simple handheld scanner and that's it. I thinks its an Autoxray brand but I can check.

Now the contractor that inspects the in-use cars has several higher level scan tools that they use for the in-use inspections. Tobias would know what they have better than me.

-Jim

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Monday, July 28, 2014 3:11 PM
To: Snyder, Jim
Subject: EPA Scan Tool

Hello Jim,

Can we get the make/model of the type of Scan tools EPA uses to check our cars out before testing? We talked with one of the gentlemen in the lab doing the drive trace last time we were at EPA, and he mentioned that usually they use a generic scan tool, but that he thought for our cars they might be using a laptop with some software on it. We talked to Vince afterwards and he said he didn't know of them using a laptop to do any readouts.

We are trying to get an idea of what EPA uses so we can mirror the readouts here before the vehicle gets delivered.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

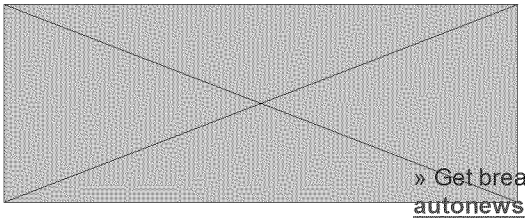
(248)754-4209

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/28/2014 8:37:20 PM
Subject: DAILY: Ford hikes revamped F-150 pickup prices | Consumer Reports presses Toyota to recall some Camry hybrids | Akerson says GM's problems were worse than thought | BMW's new EV charger

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Ford, Ram quarrel over heavy-duty pickup towing title

July 28, 2014



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TOP NEWS

Ford hikes revamped F-150 pickup prices as much as $3,385

UPDATED: 7/28/14 3:14 pm ET - analyst reaction added
11:36 am U.S. ET | Jul 28

Ford is raising prices on the new 2015 aluminum-bodied F-150 pickup by $340 to $3,385, or 1 percent to 7 percent, and has trimmed the number of models to five from 11. ... » READ

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4:21 pm U.S. ET | Jul 28

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THE GM RECALL

Akerson says GM's problems were worse than execs thought

11:01 am U.S. ET | Jul 28

Former General Motors CEO Dan Akerson said the automaker's delayed ignition switch recall was indicative of a flawed corporate culture that was worse than he and other executives had originally recognized. ... » READ

BMW unveils cheaper, suitcase-sized EV charger

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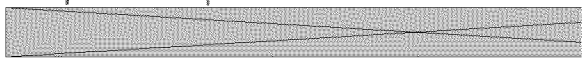
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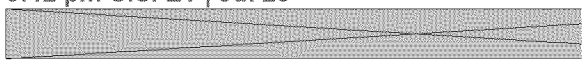
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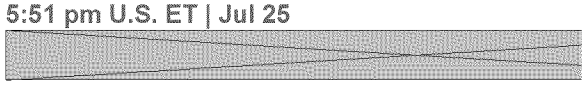
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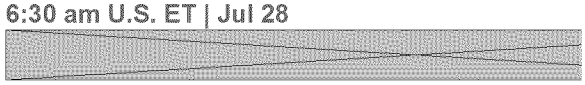
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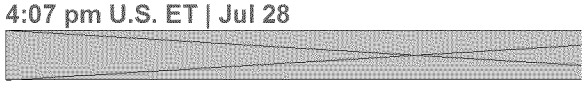
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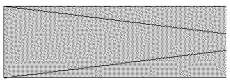


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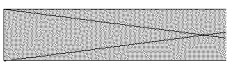
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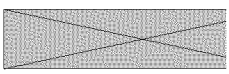
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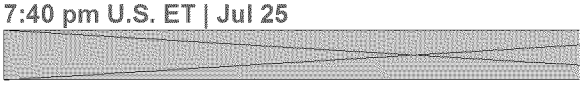


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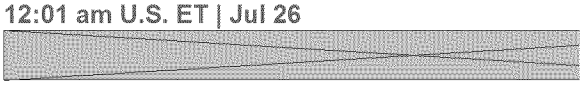
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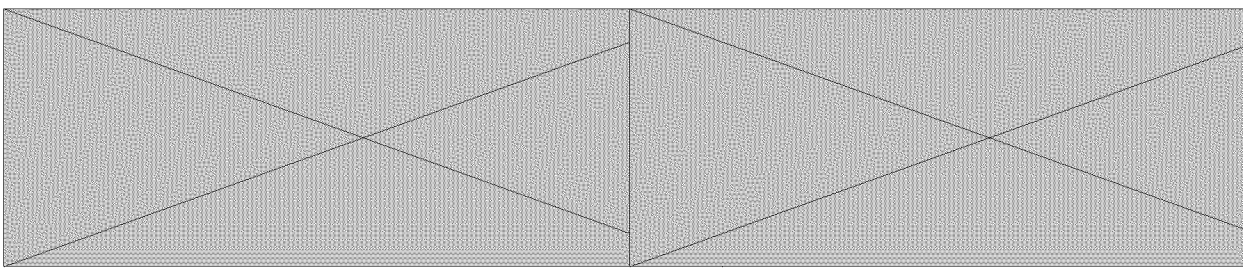
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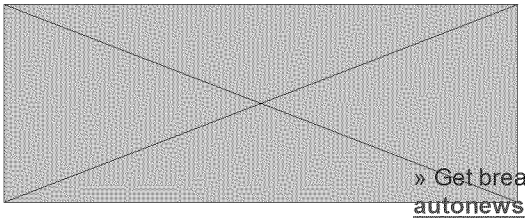
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 7/28/2014 8:37:27 PM
Subject: DAILY: Ford hikes revamped F-150 pickup prices | Consumer Reports presses Toyota to recall some Camry hybrids | Akerson says GM's problems were worse than thought | BMW's new EV charger

Today's most read story

Ford, Ram quarrel over heavy-duty pickup towing title

July 28, 2014



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TOP NEWS

Ford hikes revamped F-150 pickup prices as much as $3,385

UPDATED: 7/28/14 3:14 pm ET - analyst reaction added
11:36 am U.S. ET | Jul 28

Ford is raising prices on the new 2015 aluminum-bodied F-150 pickup by $340 to $3,385, or 1 percent to 7 percent, and has trimmed the number of models to five from 11. ... » READ

Consumer Reports presses Toyota to recall some 177,500 Camry hybrids

4:21 pm U.S. ET | Jul 28

Consumer Reports called on Toyota to recall about 177,500 older Camry hybrid sedans to address potential power brake defects. ... » READ

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THE GM RECALL

Akerson says GM's problems were worse than execs thought

11:01 am U.S. ET | Jul 28

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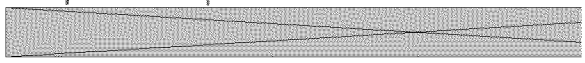
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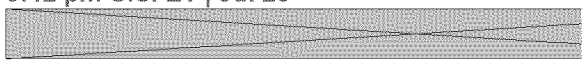
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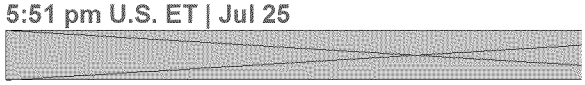
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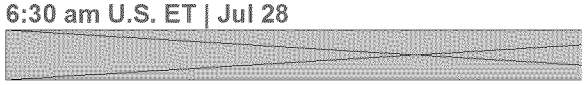
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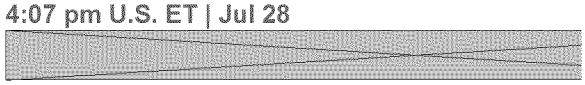
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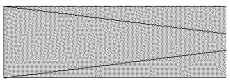


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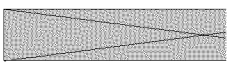
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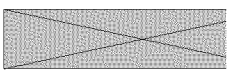
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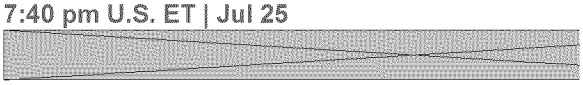


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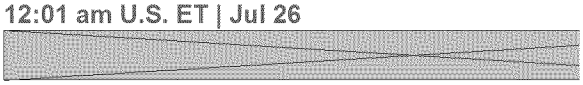
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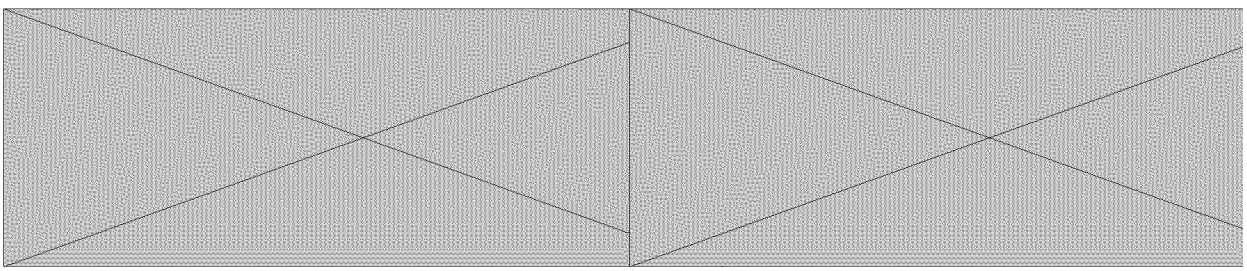
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. .

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 7/29/2014 1:02:46 PM
Subject: 2015 Fuel Economy Labels

Hi Dave;

If you are in the office today, could you give me a call regarding 2015 fuel economy labels?

Thanks,

RET

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Tue 7/29/2014 1:18:51 PM
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014 [Thanks] NNTO

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Monday, July 28, 2014 7:22 AM
To: Good, David
Cc: Snyder, Jim
Subject: RE: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Hi Dave;

Thanks for your phone message and mail. I made corrections to six label indexes in Verify to set the five year fuel savings or spending to the correct values. Two of those cases were flagged because I used a zero value for the spending field instead of zero in the fuel savings field. In our case, all values used on fuel economy labels were correct and on the Monroney labels used in the field. No incorrect fuel economy labels were used on port released vehicles.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, July 25, 2014 7:47 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: re: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of July 23, 2014

Attached are the data in Verify as of July 23, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

Note: The macro hadn't been double checking your 5 year fuel costs previously. I corrected the macro today. It did pick up a few errors, but most manufacturers had calculated the 5-year "You Save" or "You Spend" values correctly. Call me or email me if you need to discuss it a little. DOE doesn't use those values for www.fueleconomy.gov---they calculate their own values based on the weekly average fuel prices in the U.S.

The next normal posting of 2015 FE Label data will be on Aug 1, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

I'm out of the office on Monday but back on Tues (7/29).

Thanks

To: Bain, Debbie T.[baindt@ornl.gov]; Bluestein, Linda[linda.bluestein@ee.doe.gov]; Bunker, Amy[Bunker.Amy@epa.gov]; Dafoe, Wendy[wendy.dafoe@nrel.gov]; Deitchel, Judi[judi.deitchel@nrel.gov]; French, Roberts[french.roberts@epa.gov]; Gibson, Robert C.[gibsonrc@ornl.gov]; Hopson, Janet L.[hopsonjl@ornl.gov]; Pugliese, Holly[pugliese.holly@epa.gov]; Saulsbury, Bo[saulsburyjw@ornl.gov]; Shea, Shannon[shannon.shea@ee.doe.gov]; Smith, Dennis[dennis.a.smith@ee.doe.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Zaremski, Sara[zaremski.sara@epa.gov]
Cc: Snapp, Lisa[snapp.lisa@epa.gov]
From: Good, David
Sent: Tue 7/29/2014 4:11:21 PM
Subject: RE: My homework items are attached from our EPA/DOE 7/2/2014 meeting
Future MPG Technology from EPA 2017 CAFE-GHG final rule.714.pdf
2006 FE Guide-advanced technologies.714.pdf
2009-13MY VW TDI Biodiesel letter-Feb-2013.pdf

Dennis & all,

Attached is a copy of the VW Biodiesel letter.

Also, in our last meeting (7/2/14) someone from NREL or DOE mentioned that they were meeting with someone to discuss Biodiesel (or had some new technical information on Biodiesel). Was there a "white paper" report or anything interesting that came out of that meeting that you could forward to us EPA folks?

Dave

From: Good, David
Sent: Tuesday, July 08, 2014 2:46 PM
To: 'Bain, Debbie T.'; Bluestein, Linda; Bunker, Amy; Dafoe, Wendy; Deitchel, Judi; French, Roberts; Gibson, Robert C.; Hopson, Janet L.; Pugliese, Holly; Saulsbury, Bo; Shea, Shannon; Smith, Dennis; Wehrly, Linc; Zaremski, Sara
Cc: Snapp, Lisa
Subject: RE: My homework items are attached from our EPA/DOE 7/2/2014 meeting

Dennis, Debbie & all,

Attached are:

•□□□□□□□ The advanced technology section of the 2006 FE Guide (for reference)

•□□□□□□□ Future technologies which EPA and NHTSA expect will be on 2015-2025 vehicles (as outlined in the preamble of the EPA/NHTSA 2017-2025 GHG/CAFE final rule).

•□□□□□□□ A copy of VW's B20 Biodiesel letter which was sent to 2009-2013 Illinois owners of VW diesel-fueled vehicles. [Although the VW letter is available on the web, please don't go out of your way to circulate it outside of your office.]

For the first two attachments, I'm thinking we could list some of the expected engine, transmission, vehicle and electrification technologies on page 4 of the current Printed Guide (instead of the Stop-Start write-up)---- and encourage customers to purchase new vehicles which are equipped with some of these new technology features when they are buying new cars & trucks. [I'm thinking that we could also include the tips for hybrids, PHEVs and EVs on that page.]

For Biodiesel, I'd recommend we add a B20 footnote to vehicles in the 2015 Printed Guide which recommend B20 to their customers. The manufacturer's maximum percent Biodiesel recommendation is in column 31 of the spreadsheet which I send to Janet. If you have any interesting technical information about Biodiesel, please forward it to us EPA folks.

Dave

From: Bain, Debbie T. [mailto:baindt@ornl.gov]
Sent: Tuesday, July 01, 2014 2:12 PM
To: Bain, Debbie T.; Bluestein, Linda; Bunker, Amy; Dafoe, Wendy; Deitchel, Judi; French, Roberts; Gibson, Robert C.; Good, David; Hopson, Janet L.; Pugliese, Holly; Saulsbury, Bo; Shea, Shannon; Smith, Dennis; Wehrly, Linc; Zaremski, Sara
Subject: REMINDER: 2015 FEG Kick-Off Call TOMORROW

Hello All:

Our first conference call for the 2015 Fuel Economy Guide will be tomorrow, July 2 at 2:30 PM (Eastern Time).

The call-in number is 865-574-1000; ask for Bo Saulsbury's conference call.

AGENDA

Schedule

Covers (if ready from graphic artist)

Text Revisions

Hot Topics?

I have attached a copy of the 2015 FEG Timeline and a Word file of last year's text to review.

Thank you.

Debbie

865-946-1311

New technologies from EPA 2017 final GHG rule

received during the public comment period.

In the proposal, we presented our assessments of the costs and effectiveness of all the technologies that we believe manufacturers are likely to use to meet the requirements of this rule, including the latest information on several quickly-changing technologies. The proposal included new estimates for hybrid costs based on a peer-reviewed ANL battery cost model. We also presented in the proposal new cost data and analyses relating to several technologies based on a study by FEV: an 8-speed automatic transmission replacing a 6-speed automatic transmission; an 8-speed dual clutch transmission replacing a 6-speed dual clutch transmission; a power-split hybrid powertrain with an I4 engine replacing a conventional engine powertrain with V6 engine; a mild hybrid with stop-start technology and an I4 engine replacing a conventional I4 engine; and the Fiat Multi-Air engine technology. Also in the proposal, we presented an updated assessment of our estimated costs associated with mass reduction.

As would be expected given that some of our cost estimates were developed several years ago, we have also updated all of our base direct manufacturing costs to put them in terms of more recent dollars (2010 dollars are used in this final rule while 2009 dollars were used in the proposal). As proposed, we have also updated our methodology for calculating indirect costs associated with new technologies since completing both the MYs 2012–2016 final rule and the TAR. We continue to use the indirect cost multiplier (ICM) approach used in those analyses, but have made important changes to the calculation methodology—changes done in response to ongoing staff evaluation and public input.

Since the MYs 2012–2016 rule and TAR, the agencies have updated many of the technologies' effectiveness estimates largely based on new vehicle simulation work conducted by Ricardo Engineering. This simulation work provides the effectiveness estimates for a number of the technologies most heavily relied on in the agencies' analysis of potential standards for MYs 2017–2025. Additionally for the final rule, NHTSA conducted a vehicle simulation project with Argonne National Laboratory (ANL), as described in NHTSA's FRIA, that performed additional analyses on mild hybrid technologies and advanced transmissions to help NHTSA develop effectiveness values better tailored for the CAFE model's incremental structure. The effectiveness values for the mild hybrid vehicles were applied by both agencies for the final rule.[232] Additionally, NHTSA updated the effectiveness values of advanced transmissions coupled with naturally-aspirated engines for the final rule.[233]

The agencies also reviewed the findings and recommendations in the updated NAS report "Assessment of Fuel Economy Technologies for Light-Duty Vehicles" that was completed and issued after the MYs 2012–2016 final rule.[234] NHTSA's sensitivity analysis examining the impact of using some of the NAS cost and effectiveness estimates on the proposed standards is presented in NHTSA's final RIA.

The agencies received comments to the proposal on some of these assessments as discussed further below. Also, since the time of the proposal, in some cases we have been able to improve on our earlier assessments. We note these comments and the improvements made in the assessments in the discussion of each technology, below. However, the agencies did not receive comments for most of the technical and cost assessments presented in the proposal, and the agencies have concluded the assessments in the proposal remain valid for this final rule.

Key changes in the final rule relative to the proposal are the use of 2010 dollars rather than 2009 dollars, updates to all battery pack and non-battery costs for hybrids, plug-in hybrids and full electric vehicles (because an updated version of the Argonne National Labs BatPaC model was available which more appropriately included a battery discharge safety system in the costs), and the inclusion of a mild hybrid technology that was not included in the proposal. NHTSA updated the effectiveness values of advanced transmissions coupled with naturally-aspirated engines based on ANL's simulation work. We describe these changes below and in Chapter 3 of the Joint TSD. We next provide a brief summary of the technologies that we considered for this final rule; Chapter 3 of the Joint TSD presents our assessments of these technologies in much greater detail.

[232] EPA's lumped parameter model gave similar results as ANL's model for three of five vehicle classes, which served as a valuable validation to the tool. However EPA used the same ANL effectiveness values for mild hybrids to be harmonized with NHTSA's inputs.

[233] The Ricardo simulations did not include this technology combination, and EPA did not include this combination in their packages.

[234] "Assessment of Fuel Economy Technologies for Light-Duty Vehicles", National Research Council of the National Academies, June 2010.

1. What technologies did the agencies consider?

The agencies conclude that manufacturers can add a variety of technologies to each of their vehicle models and/or platforms in order to improve the vehicles' fuel economy and GHG performance. In order to analyze a variety of regulatory alternative scenarios, it was essential to have a thorough understanding of the technologies available to the manufacturers. As was the case for the proposal, the analyses we performed for this final rule included an assessment of the cost, effectiveness, availability, development time, and manufacturability of various technologies within the normal redesign and refresh periods of a vehicle line (or in the design of a new vehicle). As we describe in the Joint TSD, the point in time when we project that a technology can be applied affects our estimates of the costs as well as the technology penetration rates ("phase-in caps").

The agencies considered dozens of vehicle technologies that manufacturers could use to improve the fuel economy and reduce CO_2 emissions of their vehicles during the MYs 2017–2025 timeframe. Many of the technologies we considered are available today, are in production of some vehicles, and could be incorporated into vehicles more widely as manufacturers make their product development decisions. These are "near-term" technologies and are identical or very similar to those anticipated in the agencies' analyses of compliance strategies for the MYs 2012–2016 final rule. For this rulemaking, given its time frame, we also considered other technologies that are not currently in production, but that are beyond the initial research phase, and are under development and expected to be in production in the next 5–10 years. Examples of these technologies are downsized and turbocharged engines operating at combustion pressures even higher than today's turbocharged engines, and an emerging hybrid architecture combined with an 8-speed dual clutch transmission, a combination that is not available today. These are technologies that the agencies believe that manufacturers can, for the most part, apply both to cars and trucks, and that we expect will achieve significant improvements in fuel economy and reductions in CO_2 emissions at reasonable costs in the MYs 2017 to 2025 timeframe. The agencies did not consider technologies that are currently in an initial stage of research because of the uncertainty involved in the availability and feasibility of

implementing these technologies with significant penetration rates for this analysis. The agencies recognize that due to the relatively long time frame between the date of this final rule and 2025, it is very possible that new and innovative technologies will make their way into the fleet, perhaps even in significant numbers, that we have not considered in this analysis. We expect to reconsider such technologies as part of the mid-term evaluation, as appropriate, and manufacturers may be able to use them to generate credits under a number of the flexibility and incentive programs provided in this final rule.

The technologies that we considered can be grouped into four broad categories: engine technologies; transmission technologies; vehicle technologies (such as mass reduction, tires and aerodynamic treatments); and electrification technologies (including hybridization and changing to full electric drive).[235] We discuss the specific technologies within each broad group below. The list of technologies presented below and in the proposal is nearly identical to that presented in both the MYs 2012–2016 final rule and the 2010 TAR, with the following new technologies added to the list since the last final rule: the P2 hybrid, a newly emerging hybridization technology that was also considered in the 2010 TAR; mild hybrid technologies that were not included in the proposal; continued improvements in gasoline engines, with greater efficiencies and downsizing; continued significant efficiency improvements in transmissions; and ongoing levels of improvement to some of the seemingly more basic technologies such as lower rolling resistance tires and aerodynamic treatments, which are among the most cost effective technologies available for reducing fuel consumption and GHGs. Not included in the list below are technologies specific to air conditioning system improvements and off-cycle controls, which are presented in Section II.F of this preamble and in Chapter 5 of the Joint TSD.

Few comments were received specific to these technologies. The Alliance emphasized the agencies should examine the progress in the development of powertrain improvements as part of the mid-term evaluation and determine if researchers are making the kind of breakthroughs anticipated by the agencies for technologies like high-efficiency transmissions. VW cautioned the agencies about the uncertainties with high BMEP engines, including the possible costs due to increased durability requirements and questioned the potential benefit for this type of engine of engine technology. VW commented that additional development is necessary to overcome the significant obstacles of these types of engines. ICCT emphasized that many of the powertrain effectiveness values, derived by Ricardo, were too conservative as technology in this area is expected to improve at a faster pace during the rulemaking period. As described in the joint TSD, the agencies relied on a number of technical sources for this engine technology. Additionally as described in the Ricardo report, Ricardo was tasked with extrapolating technologies to their expected performance and efficiency levels in the 2020–2025 timeframe to account for future improvements. The agencies continue to believe that the modeling and simulation conducted by Ricardo is robust, as they have built prototypes of these engines and used their knowledge to help inform the modeling. The agencies will, of course, continue to watch the development of this key technology in the future. For transparency purposes and full disclosure, it is important to note the ICCT partially funded the Ricardo study.

a. Types of Engine Technologies Considered

Low-friction lubricants including low viscosity and advanced low friction lubricant oils are now available with improved performance. If manufacturers choose to make use of these lubricants, they may need to make engine changes and conduct durability testing to accommodate the lubricants. The costs in our analysis consider these engine changes and testing requirements. This level of low friction lubricants is expected to exceed 85 percent penetration by MY 2017 and reach nearly 100 percent in MY 2025.[236]

Reduction of engine friction losses (first level) can be achieved through low-tension piston rings, roller cam followers, improved material coatings, more optimal thermal management, piston surface treatments, and other improvements in the design of engine components and subsystems that improve the efficiency of engine operation. This level of engine friction reduction is expected to exceed 70 percent penetration by MY 2017.

Advanced low friction lubricants and reduction of engine friction losses (second level) are new for our analysis for the proposal and this final rule. As technologies advance in the coming years, we expect that there will be further development in both low friction lubricants and engine friction reductions. The agencies grouped the development in these two related areas into a single technology and applied them for MY 2017 and beyond.

Cylinder deactivation disables the intake and exhaust valves and prevents fuel injection into some cylinders during light-load operation. The engine runs temporarily as though it were a smaller engine which substantially reduces pumping losses.

Variable valve timing alters the timing of the intake valves, exhaust valves, or both, primarily to reduce pumping losses, increase specific power, and control residual gases.

Discrete variable valve lift increases efficiency by optimizing air flow over a broader range of engine operation, which reduces pumping losses. This is accomplished by controlled switching between two or more cam profile lobe heights.

Continuous variable valve lift is an electromechanical or electro-hydraulic system in which valve timing is changed as lift height is controlled. This yields a wide range of opportunities for optimizing volumetric efficiency and performance, including enabling the engine to be valve-throttled.

Stoichiometric gasoline direct-injection technology injects fuel at high pressure directly into the combustion chamber to improve cooling of the air/fuel charge as well as combustion quality within the cylinder, which allows for higher compression ratios and increased thermodynamic efficiency.

Turbocharging and downsizing increases the available airflow and specific power level, allowing a reduced engine size while maintaining performance. Engines of this type use gasoline direct injection (GDI) and dual cam phasing. This reduces pumping losses at lighter loads in comparison to a larger engine. We continue to include an 18 bar brake mean effective pressure (BMEP) technology (as in the MYs 2012–2016 final rule) and are also including both 24 bar BMEP and 27 bar BMEP technologies. The 24 bar BMEP technology would use a single-stage, variable geometry turbocharger which would provide a higher intake boost pressure available across a broader

[235] NHTSA's analysis considers these technologies in five groups rather than four—hybridization is one category, and "electrification/accessories" is another.

[236] The penetration rates shown in this section are general results applicable to either the NHTSA or EPA analysis, to either the 2008 based or the 2010 based fleet projection.

range of engine operation than conventional 18 bar BMEP engines. The 27 bar BMEP technology would require higher boost levels and thus would use a two-stage turbocharger, necessitating use of cooled exhaust gas recirculation (EGR) as described below. The 18 bar BMEP technology is applied with 33 percent engine downsizing, 24 bar BMEP is applied with 50 percent engine downsizing, and 27 bar BMEP is applied with 56 percent engine downsizing.

Cooled exhaust-gas recirculation (EGR) reduces the incidence of knocking combustion with additional charge dilution and obviates the need for fuel enrichment at high engine power. This allows for higher boost pressure and/or compression ratio and further reduction in engine displacement and both pumping and friction losses while maintaining performance. Engines of this type use GDI and both dual cam phasing and discrete variable valve lift. The EGR systems considered in this assessment would use a dual-loop system with both high and low pressure EGR loops and dual EGR coolers. For the proposal and this final rule, cooled EGR is considered to be a technology that can be added to a 24 bar BMEP engine and is an enabling technology for 27 bar BMEP engines.

Diesel engines have several characteristics that give superior fuel efficiency, including reduced pumping losses due to lack of (or greatly reduced) throttling, high pressure direct injection of fuel, a combustion cycle that operates at a higher compression ratio, and a very lean air/fuel mixture relative to an equivalent-performance gasoline engine. This technology requires additional enablers, such as a NO_X adsorption catalyst system or a urea/ammonia selective catalytic reduction system for control of NO_X emissions during lean (excess air) operation.

b. Types of Transmission Technologies Considered

Improved automatic transmission controls optimize the shift schedule to maximize fuel efficiency under wide ranging conditions and minimizes losses associated with torque converter slip through lock-up or modulation. This technology is included because it exists in the baseline fleets, but its penetration is expected to decrease over time as it is replaced by other more efficient technologies.

Shift optimization is a strategy whereby the engine and/or transmission controller(s) emulates a CVT by continuously evaluating all possible gear options that would provide the necessary tractive power and selecting the best gear ratio that lets the engine run in the most efficient operating zone.

Six-, seven-, and eight-speed automatic transmissions are optimized by changing the gear ratio span to enable the engine to operate in a more efficient operating range over a broader range of vehicle operating conditions. While a six speed transmission application was most prevalent for the MYs 2012–2016 final rule, eight speed transmissions are expected to be readily available and applied in the MYs 2017 through 2025 timeframe.

Dual clutch or automated shift manual transmissions are similar to manual transmissions, but the vehicle controls shifting and launch functions. A dual-clutch automated shift manual transmission (DCT) uses separate clutches for even-numbered and odd-numbered gears, so the next expected gear is pre-selected, which allows for faster and smoother shifting. The MYs 2012–2016 final rule limited DCT applications to a maximum of 6 speeds. For the proposal and this final rule, we have considered both 6-speed and 8-speed DCT transmissions.

Continuously variable transmission commonly uses V-shaped pulleys connected by a metal belt rather than gears to provide ratios for operation. Unlike manual and automatic transmissions with fixed transmission ratios, continuously variable transmissions can provide fully variable and an infinite number of transmission ratios that enable the engine to operate in a more efficient operating range over a broader range of vehicle operating conditions. The CVT is maintained for existing baseline vehicles and not considered for future vehicles in this rule due to the availability of more cost effective transmission technologies.

Manual 6-speed transmission offers an additional gear ratio, often with a higher overdrive gear ratio, than a 5-speed manual transmission.

High Efficiency Gearbox (automatic, DCT or manual) represents continuous improvement in seals, bearings and clutches; super finishing of gearbox parts; and development in the area of lubrication—all aimed at reducing frictional and other parasitic load in the system for an automatic or DCT type transmission.

c. Types of Vehicle Technologies Considered

Lower-rolling-resistance tires have characteristics that reduce frictional losses associated with the energy dissipated mainly in the deformation of the tires under load, thereby improving fuel economy and reducing CO_2 emissions. For the proposal and final rule, we considered two levels of lower rolling resistance tires that reduce frictional losses even further. The first level of low rolling resistance tires would have 10 percent rolling resistance reduction while the 2nd level would have 20 percent rolling resistance reduction compared to 2008 baseline vehicle. This second level of development marks an advance over low rolling resistance tires considered during the MYs 2014–2018 medium- and heavy- duty vehicle greenhouse gas emissions and fuel efficiency rulemaking, see 76 FR 57207, 57229.) The first level of lower rolling resistance tires is expected to exceed 90 percent penetration by the 2017.

Low-drag brakes reduce the sliding friction of disc brake pads on rotors when the brakes are not engaged, because the brake pads are pulled away from the rotors.

Front or secondary axle disconnect for four-wheel drive systems provides a torque distribution disconnect between front and rear axles when torque is not required for the non-driving axle. This results in the reduction of associated parasitic energy losses.

Aerodynamic drag reduction can be achieved via two approaches, either reducing the drag coefficients or reducing vehicle frontal area. To reduce the drag coefficient, skirts, air dams, underbody covers, and more aerodynamic side view mirrors can be applied. In addition to the standard aerodynamic treatments, the agencies have included a second level of aerodynamic technologies, which could include active grill shutters, rear visors, and larger under body panels. We estimate that the first level of aerodynamic drag improvement will reduce aerodynamic drag by 10 percent relative to the baseline 2008 vehicle while the second level would reduce aerodynamic drag by 20 percent relative to 2008 baseline vehicles. The second level of aerodynamic technologies was not considered in the MYs 2012–2016 final rule.

Mass Reduction can be achieved through either substitution of lower density and/or higher strength materials, or changing the design to use less material. With design optimization, part consolidation, and improved manufacturing processes, these strategies can be applied while maintaining the performance attributes of the component, system, or vehicle. The agencies applied mass reduction of up to 20 percent relative to MY 2008 levels in this final rule compared to only 10 percent in the MYs 2012–2016 final rule. The agencies also determined effectiveness values for hybrid, plug-in

and electric vehicles based on net mass reduction, or the difference between the applied mass reduction (capped at 20 percent) and the added mass of electrification components. In assessing compliance strategies and in structuring the standards, the agencies only considered levels of vehicle mass reduction that, in our estimation, would not adversely affect overall fleet safety. An extensive discussion of mass reduction technologies and their associated costs is provided in Chapter 3 of the Joint TSD, and the discussion on safety is in Section II.G of the Preamble.

d. Types of Electrification/Accessory and Hybrid Technologies Considered

Electric power steering (EPS)/Electro-hydraulic power steering (EHPS) is an electrically-assisted steering system that has advantages over traditional hydraulic power steering because it replaces the engine-driven and continuously operated hydraulic pump, thereby reducing parasitic losses from the accessory drive. Manufacturers have informed the agencies that full EPS systems are being developed for all light-duty vehicles, including large trucks. However, lacking data about when these transitions will occur, the agencies have applied the EHPS technology to large trucks and the EPS technology to all other light-duty vehicles.

Improved accessories (IACC) may include high efficiency alternators and electrically driven (i.e., on-demand) water pumps and cooling fans. This excludes other electrical accessories such as electric oil pumps and electrically driven air conditioner compressors. New for this rule is a second level of IACC (IACC2), which consists of the IACC technologies with the addition of a mild regeneration strategy and a higher efficiency alternator. The first level of IACC improvements is expected to be at more than 50 percent penetration by the 2017MY.

12-volt Stop-Start, sometimes referred to as idle-stop or 12-volt micro hybrid, is the most basic hybrid system that facilitates idle-stop capability. These systems typically incorporate an enhanced performance battery and other features such as electric transmission and cooling pumps to maintain vehicle systems during idle-stop.

Higher Voltage Stop-Start/Belt Integrated Starter Generator (BISG) sometimes referred to as a mild hybrid, provides idle-stop capability and uses a higher voltage battery with increased energy capacity over typical automotive batteries. The higher system voltage allows the use of a smaller, more powerful electric motor. This system replaces a standard alternator with an enhanced power, higher voltage, higher efficiency starter-alternator that is belt driven and that can recover braking energy while the vehicle slows down (regenerative braking). This technology was mentioned but not included in the proposal because the agencies had incomplete information at that time. Since the proposal, the agencies have obtained better data on the costs and effectiveness of this technology (see Chapter 3.4.3 of the joint TSD). Therefore, the agencies have revised their technical analysis on both the cost and effectiveness and found that the technology is now competitive with the others in NHTSA's technology decision trees and EPA's technology packages. EPA and NHTSA are providing incentives to encourage this and other hybrid technologies on full-size pick-up trucks, as described in Section II.F.3.

Integrated Motor Assist (IMA)/Crank integrated starter generator (CISG) provides idle-stop capability and uses a high voltage battery with increased energy capacity over typical automotive batteries. The higher system voltage allows the use of a smaller, more powerful electric motor and reduces the weight of the wiring harness. This system replaces a standard alternator with an enhanced power, higher voltage and higher efficiency starter-alternator that is crankshaft mounted and can recover braking energy while the vehicle slows down (regenerative braking). The IMA technology is not included by either agency as an enabling technology in the analysis supporting this rule because we believe that other technologies provide better cost effectiveness, although it is included as a baseline technology because it exists in our 2008 and 2010 baseline fleets.

P2 Hybrid is a newly emerging hybrid technology that uses a transmission integrated electric motor placed between the engine and a gearbox or CVT, much like the IMA system described above except with a wet or dry separation clutch which is used to decouple the motor/transmission from the engine. In addition, a P2 hybrid would typically be equipped with a larger electric machine. Disengaging the clutch allows all-electric operation and more efficient brake-energy recovery. Engaging the clutch allows efficient coupling of the engine and electric motor and, when combined with a DCT transmission, provides similar efficiency at lower cost than power-split or 2-mode hybrid systems.

2-Mode Hybrid is a hybrid electric drive system that uses an adaptation of a conventional stepped-ratio automatic transmission by replacing some of the transmission clutches with two electric motors that control the ratio of engine speed to vehicle speed, while clutches allow the motors to be bypassed. This improves both the transmission torque capacity for heavy-duty applications and reduces fuel consumption and CO_2 emissions at highway speeds relative to other types of hybrid electric drive systems. The 2-mode hybrid technology is not included by either agency as an enabling technology in the analysis supporting this rule because we believe that other technologies provide better cost effectiveness, although it is included as a baseline technology because it exists in our 2008 and 2010 baseline fleets.

Power-split Hybrid is a hybrid electric drive system that replaces the traditional transmission with a single planetary gearset and two motor/generators. One motor/generator uses the engine to either charge the battery or supply additional power to the drive motor. A second, more powerful motor/generator is permanently connected to the vehicle's final drive and always turns with the wheels. The planetary gear splits engine power between the first motor/generator and the drive motor to either charge the battery or supply power to the wheels. The power-split hybrid technology is not included by either agency as an enabling technology in the analysis supporting this rule because we believe that other technologies provide better cost effectiveness, although it is included as a baseline technology because it exists in our 2008 baseline fleet.

Plug-in hybrid electric vehicles (PHEV) are hybrid electric vehicles with the means to charge their battery packs from an outside source of electricity (usually the electric grid). These vehicles have larger battery packs with more energy storage and a greater capability to be discharged than other hybrid electric vehicles. They also use a control system that allows the battery pack to be substantially depleted under electric-only or blended mechanical/electrical operation and batteries that can be cycled in charge-sustaining operation at a lower state of charge than is typical of other hybrid electric vehicles. These vehicles are sometimes referred to as Range Extended Electric Vehicles (REEV). In this MYs 2017–2025 analysis, the agencies have included PHEVs with several all-electric ranges as potential technologies. EPA's analysis includes a 20-mile and 40-mile range PHEVs, while NHTSA's analysis only includes a 30-mile PHEV.

Electric vehicles (EV) are equipped with all-electric drive and with systems powered by energy-optimized batteries charged primarily from grid electricity. For this rule, the agencies have included EVs with several ranges—75 miles, 100 miles, and 150 miles—as potential technologies.

c. Technologies Considered but Deemed "Not Ready" in the MYs 2017–2025 Timeframe

Fuel cell electric vehicles (FCEVs) utilize a full electric drive platform but consume electricity generated by an on-board fuel cell and hydrogen fuel. Fuel cells are electro-chemical devices that directly convert reactants (hydrogen and oxygen via air) into electricity, with the potential of achieving more than twice the efficiency of conventional internal combustion engines. Most automakers that currently have FCEVs under development use high-pressure gaseous hydrogen storage tanks. The high-pressure tanks are similar to those used for compressed gas storage in more than 10 million CNG vehicles worldwide, except that they are designed to operate at a higher pressure (350 bar or 700 bar vs. 250 bar for CNG). While we expect there will be some limited introduction of FCEVs into the marketplace in the time frame of this rule, we expect the total number of vehicles produced with this technology will be relatively small. Thus, the agencies did not consider FCEVs in the modeling analysis conducted for this rule.

There are a number of other potential technologies available to manufacturers in meeting the 2017–2025 standards that the agencies have evaluated but have not considered in our final analyses. These include HCCI, "multi-air", and camless valve actuation, and other advanced engines currently under development.

2. How did the agencies determine the costs of each of these technologies?

As noted in the introduction to this section, most of the direct cost estimates for technologies carried over from the MYs 2012–2016 final rule and subsequently used in this final rule are fundamentally unchanged since the MYs 2012–2016 final rule analysis and/or the 2010 TAR. We say "fundamentally" unchanged since the basis of the direct manufacturing cost estimates have not changed; however, the costs have been updated to more recent dollars, our estimated learning effects have resulted in further cost reductions for some technologies, the indirect costs are calculated using a modified methodology, and the impact of long-term ICMs is now present during the rulemaking timeframe. Besides these changes, there are also some other notable changes to the costs used in previous analyses. We highlight these changes in Section II.D.2.a, below. We highlight the changes to the indirect cost methodology and adjustments to more recent dollars in Sections II.D.2.b and c. Lastly, we present some updated terminology used for our approach to estimating learning effects in an effort to eliminate confusion with our past terminology. This is discussed in Section II.D.2.d, below.

New for the final rule relative to the proposal are the use of 2010 dollars rather than 2009 dollars, updates to all battery pack and non-battery costs for hybrids, plug-in and full electric vehicles because an updated version of the ANL BatPaC model was available and because we wanted to include a battery discharge safety system in the costs, and the inclusion of a mild hybrid technology that was not included in the proposal. We describe these changes below and in Chapter 3 of the Joint TSD.

The agencies note that the technology costs included in this final rule take into account those associated with the initial build of the vehicle. We received comments on the proposal for this rule suggesting that there could be additional maintenance required with some new technologies, and that additional maintenance costs could occur as a result because "the technology will be more complicated and time consuming for mechanics to repair." [237] For this final rule, the agencies have estimated such maintenance costs. The maintenance costs are not included as new vehicle costs and are not, therefore, used in either agency's modeling work. However, the maintenance costs are included when estimating costs to society in each agency's benefit-cost analyses. We discuss these maintenance costs briefly in section II.D.5 below, and in detail in Chapter 3 of the final Joint TSD and in sections III and IV of this preamble.

a. Direct Manufacturing Costs (DMC)

For direct manufacturing costs (DMC) related to turbocharging, downsizing, gasoline direct injection, transmissions, as well as non-battery-related costs on hybrid, plug-in hybrid, and electric vehicles, the agencies have relied on costs derived from "tear-down" studies (see below). For battery-related DMC for HEVs, PHEVs, and EVs, the agencies have relied on the BatPaC model developed by Argonne National Laboratory for the Department of Energy. For mass reduction DMC, the agencies have relied on several studies as described in detail in Chapter 3 of the Joint TSD. We discuss each of these briefly here and in more detail in the Joint TSD. For the majority of the other technologies considered in this rule and described above, and where no new data were available, the agencies have relied on the MYs 2012–2016 final rule and sources described there for estimates of DMC.

i. Costs From Tear-Down Studies

As a general matter, the agencies believe that the best method to derive technology cost estimates is to conduct studies involving tear-down and analysis of actual vehicle components. A "tear-down" involves breaking down a technology into its fundamental parts and manufacturing processes by completely disassembling actual vehicles and vehicle subsystems and precisely determining what is required for its production. The result of the tear-down is a "bill of materials" for each and every part of the relevant vehicle systems. This tear-down method of costing technologies is often used by manufacturers to benchmark their products against competitive products. Historically, vehicle and vehicle component tear-down has not been done on a large scale by researchers and regulators due to the expense required for such studies. While tear-down studies are highly accurate at costing technologies for the year in which the study is intended, their accuracy, like that of all cost projections, may diminish over time as costs are extrapolated further into the future because of uncertainties in predicting commodities (and raw material) prices, labor rates, and manufacturing practices. The projected costs may be higher or lower than predicted.

Over the past several years, EPA has contracted with FEV, Inc. and its subcontractor Munro & Associates, to conduct tear-down cost studies for a number of key technologies evaluated by the agencies in assessing the feasibility of future GHG and CAFE standards. The analysis methodology included procedures to scale the tear-down results to smaller and larger vehicles, and also to different technology configurations. EPA documented FEV's methodology in a report published as part of the MYs 2012–2016 rulemaking, detailing the costing of the first tear-down conducted in this work (#1 in the list below).[238]

[237] See NADA (OAR–2009–0472–7182.1, p.10) and Dawn Brooks (OAR–2009–0472–3851, pp.1–2).

[238] U.S. EPA, "Light-Duty Technology Cost Analysis Pilot Study," Contract No. EP–C–07–069, Work Assignment 1–3, December 2009, EPA–420–

VW FOIA, EPA 06/20/2017 2017-FFP_014025

level by converting the CO_2 credits determined under the EPA program (in metric tons of CO_2) for each fleet (car and truck) to a fleet fuel consumption improvement value. This improvement value would then be used to adjust the fleet's CAFE level upward. See the regulations at 40 CFR 600.510–12. Note that although the table below presents fuel consumption values equivalent to a given CO_2 credit value, these consumption values are presented for informational purposes and are not meant to imply that these values will be used to determine the fuel economy for individual vehicles.

Finally, the agencies proposed that the pre-approved menu list of off-cycle technologies and default credit values would be predicated on a certain minimum percentage of technology penetration in a manufacturer's domestic fleet. 76 FR 75381. Commenters persuasively argued that such a requirement would discourage introduction and utilization of beneficial off-cycle technologies. They pointed out that new technologies are often introduced on limited model lines or platforms both to gauge consumer acceptance and to gain additional experience with the technology before more widespread introduction. Requiring levels of technology penetration such as the 10 percent proposed for many of the menu technologies could thus create a negative rather than positive incentive to deploy off-cycle technologies. The agencies agree, and note further that having an aggressive penetration rate requirement also raises issues of sufficiency of lead time in the early years of the program. The agencies are therefore not adopting minimum penetration requirements as a prerequisite to claim default credits from the preapproved technology r[illegible]

Table II–22 shows the list of off-technologies and credits and equiv fuel consumption improvement va for cars and trucks that the agenci finalizing in today's action. The cr and fuel consumption improveme values for active aerodynamics, h efficiency exterior lighting, waste recovery and solar roof panels are scalable, depending on the amou respective improvement these sy can generate for the vehicle. The Thermal control technologies are and are limited to a total of 3.0 a[illegible] g/mi (car and truck respectively) The various pre-defined solar/thermal control technologies eligible for off-cycle credit are shown in Table II–22 below.

TABLE II–22—OFF-CYCLE TECHNOLOGIES AND CREDITS AND EQUIVALENT FUEL CONSUMPTION IMPROVEMENT VALUES FOR CARS AND LIGHT TRUCKS

Technology	Adjustments for cars		Adjustments for trucks	
	g/mi	gallons/mi	g/mi	gallons/mi
+High Efficiency Exterior Lights* (at 100 watt savings)	1.0	0.000113	1.0	0.000113
+Waste Heat Recovery (at 100W)	0.7	0.000079	0.7	0.000079
+Solar Panels (based on a 75 watt solar panel)**;				
Battery Charging Only	3.3	0.000372	3.3	0.000372
Active Cabin Ventilation and Battery Charging	2.5	0.000282	2.5	0.000282
+Active Aerodynamic Improvements (for a 3% aerodynamic drag or Cd reduction)	0.6	0.000068	1.0	0.000113
Engine Idle Start-Stop;				
w/ heater circulation system #	2.5	0.000282	4.4	0.000496
w/o heater circulation system	1.5	0.000169	2.9	0.000327
Active Transmission Warm-Up	1.5	0.000169	3.2	0.000361
Active Engine Warm-up	1.5	0.000169	3.2	0.000361
Solar/Thermal Control	Up to 3.0	0.000338	Up to 4.3	0.000484

*High efficiency exterior lighting credit is scalable based on lighting components selected from high efficiency exterior lighting list (see Joint TSD Section 5.2.3, Table 5–21).

**Solar Panel credit is scalable based on solar panel rated power, (see Joint TSD Section 5.2.4). This credit can be combined with active cabin ventilation credits.

#In order to receive the maximum engine idle start stop, the heater circulation system must be calibrated to keep the engine off for 1 minute or more when the external ambient temperature is 30 deg F and when cabin heat is demanded (see Joint TSD Section 5.2.8.1).

+This credit is scalable, however, only a minimum credit of 0.05 g/mi CO_2 can be granted.

TABLE II–23—OFF-CYCLE TECHNOLOGIES AND CREDITS FOR SOLAR/THERMAL CONTROL TECHNOLOGIES FOR CARS AND LIGHT TRUCKS

Thermal control technology	Credit (g CO_2/mi)	
	Car	Truck
Glass or Glazing	Up to 2.9	Up to 3.9
Active Seat Ventilation	1.0	1.3
Solar Reflective Paint	0.4	0.5
Passive Cabin Ventilation	1.7	2.3
Active Cabin Ventilation*	2.1	2.8

*Active cabin ventilation has potential synergies with solar panels as described in Chapter 5.2 of the joint TSD.

j. Vehicle Simulation Tool

Chapter 2 of EPA's RIA provides a detailed description of the vehicle simulation tool that EPA had developed and has used for the final rule. This tool is capable of simulating a wide range of conventional and advanced engine, transmission, and vehicle technologies over various driving cycles. It evaluates technology package effectiveness while taking into account synergy (and dis-synergy) effects among vehicle components and estimates GHG emissions for various combinations of

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dvanced energy-efficient technologies are available now! any of the vehicles currently on display in dealer showrooms ast new performance-enhancing, fuel-saving technologies at can save you money. The technologies described below can used to increase fuel economy and/or performance. To mpare fuel economy performance use, the numbers in this ide. For more about advanced technologies, visit w.fueleconomy.gov.

Hybrid Vehicles

brids combine the benefits of gasoline engines and electric tors and use other fuel-efficient technologies. Available brids are listed on page 17.

Clean Diesels

sel engines are more fuel-efficient than gasoline engines, d new breakthroughs in diesel technology have improved rformance and made these engines cleaner and quieter. day's diesel vehicles must meet the same emission require- nts as gasoline vehicles. Available diesel vehicles are listed page 16.

Improved Engine Technologies

riable valvetrains, also called *variable-cam timing*, *VVT*, and *EC®*, improve engine efficiency by optimizing the flow of fuel d air in the cylinders for various engine speeds.

Cylinder Deactivation, also called *multiple displacement*, *displacement on demand*, and *variable cylinder management*, saves fuel by deactivating cylinders when they are not needed.

Turbochargers & superchargers increase engine power, allowing engines to be downsized without sacrificing performance.

Direct Fuel Injection (DFI) allows higher compression ratios, which deliver higher performance with lower fuel consumption.

Transmission Technologies

Automated Manual Transmissions (AMTs) combine the efficiency of manual transmissions with the convenience of automatics (gears shift automatically).

Continuously Variable Transmissions (CVTs) produce an infinite number of engine/wheel speed ratios, optimizing engine operation and improving fuel efficiency.

Six- and Seven-Speed Transmissions allow an engine to operate at its most efficient speeds more of the time, improving efficiency.

TIPS FOR IMPROVING FUEL ECONOMY

Keep Your Car in Shape

Fixing a car that is noticeably out of tune can improve gas mileage by about 4%. Repairing a faulty oxygen sensor can improve fuel economy by much more!

Replacing a clogged air filter can significantly improve gas mileage.

Keeping tires inflated to the recommended pressure and using the recommended grade of motor oil can improve fuel economy by up to 5%. The manufacturer's recommended tire pressure can be found on the tire information placard and/or vehicle certification label located on the vehicle door edge, doorpost, glove-box door, or inside the trunk lid.

Plan and Combine Trips

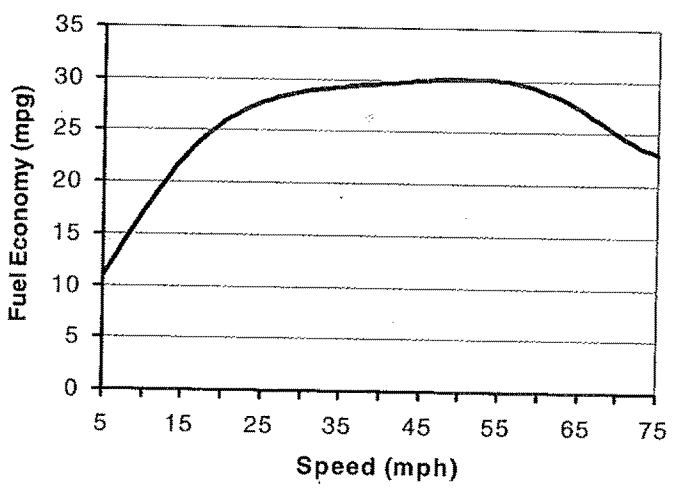
A warmed-up engine is more fuel efficient than a cold one. Many short trips taken from a cold start can use twice as much fuel as one multipurpose trip covering the same distance when the engine is warmed up and efficient.

Note: Letting your car idle to warm-up doesn't help your fuel economy, it actually uses more fuel and creates more pollution.

more tips and for more information about gasoline ing, visit www.fueleconomy.gov.

Drive More Efficiently

- Aggressive driving (speeding and rapid acceleration and braking) can lower your gas mileage by as much as 33% at highway speeds and 5% around town.
- Observe the speed limit—each 5 miles per hour (mph) you drive over 60 mph can reduce your fuel economy by 10%.
- Avoid idling—idling gets 0 miles per gallon!



Speed vs. Fuel Economy

Volkswagen of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

<MONTH YEAR>

<CUSTOMER NAME>
<CUSTOMER ADDRESS>
<CUSTOMER CITY STATE ZIPCODE>

Vehicle Identification Number (VIN): <VIN>

Subject: 2009-2013 Model Year Volkswagen TDI® Clean Diesel Vehicles Registered in Illinois Using Biodiesel Blend Fuels

Dear Volkswagen TDI Clean Diesel Owner,

As a valued Volkswagen customer, your satisfaction is our utmost priority. Because we support the development and use of renewable fuels (such as biodiesel fuel blends) we are writing to customers who have Volkswagen TDI® Clean Diesel engine vehicles registered in the State of Illinois in order to share some important information about using biodiesel fuel blends in these vehicles.

What is biodiesel?

Biodiesel is a domestically produced, clean-burning and renewable partial substitute for conventional (petroleum) diesel fuel.

Why is it important for me to know about biodiesel fuel blends?

Your vehicle was originally designed to run on "ULSD" - Ultra Low Sulfur Diesel No. 2 – fuel that complies with ASTM D-975 specifications and permits up to a maximum blend of 5% biodiesel (B5).

Due to Illinois state tax incentives for biofuels, biodiesel blends of B5 or less may not be available in Illinois. *However, we want to assure you that Volkswagen will continue to honor the terms and conditions of the Volkswagen Limited Warranties that came with your vehicle.*

Biodiesel blends (up to B20) may be used in your Illinois-registered TDI® Clean Diesel vehicle; however please be aware that biodiesel has characteristics that are different from other kinds of fuel, especially petroleum-based fuels.

How does biodiesel differ from ULSD diesel fuel?

Biodiesel can attract water and also deteriorate with age. Small amounts of biodiesel can get into the engine oil, but unlike petroleum diesel, it does not evaporate over time. This can cause the oil level in the engine to rise and can affect the quality of the oil.

USA VW-BeD IL

When I use biodiesel blends in my Illinois-registered Volkswagen TDI® Clean Diesel vehicle, what should I remember?

- Routinely check the engine oil level. A good time to do this is when you refuel, especially if you regularly do a lot of short distance or stop-and-go driving. This will help you see if the engine oil level is getting **higher**. (A rising oil level beyond the maximum indicator means an oil change is needed due to the dilution of the oil in the system; a potential characteristic of biodiesel use.) See your Owner's Manual for additional information on checking the engine oil level in your vehicle.
- If you ever notice that the engine oil level has risen or is above the maximum indicator, contact your authorized Volkswagen dealer or Volkswagen Customer CARE to schedule an oil change – regardless of the time or mileage that has elapsed since you last had an oil change performed.
- Continue to follow the oil change intervals found in the maintenance booklet that came with your vehicle, and use only engine oil that expressly complies with Volkswagen quality standard VW 507 00.
- Refuel only at trusted, commercial fueling stations that are located near main highways. These stations are more likely to have "fresh" biodiesel fuels that have not aged significantly.
- When your vehicle will be in storage (or not driven) for several weeks or months, please completely fill the fuel tank. If possible, fill the tank with Ultra Low Sulfur Diesel fuel (ASTM D975 standard Grade No. 2 D S15).

Can we assist you further?

If you have additional questions about your Illinois-registered TDI® Clean Diesel vehicle, please call or write to us at:

Volkswagen of America, Inc.
Attn: Customer CARE
3800 Hamlin Road, Auburn Hills, MI 48326
1-800-444-8982

Please keep this letter with your Warranty booklet for future reference, and deliver it to any new owner, along with the owner's manual.

We hope you are enjoying the exceptional performance and fuel economy of your TDI® Clean Diesel vehicle, and we wish you many more miles of driving pleasure. Thank you for driving a Volkswagen!

Sincerely,

Volkswagen Service & Quality

USA VW Bod R

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Glas, Tobias
Sent: Tue 7/29/2014 6:13:53 PM
Subject: FW: Dalka, 140517286

Hi Jim!

I hope that helps !

Tobias

From: Wigman, Ian
Sent: Tuesday, July 29, 2014 2:12 PM
To: Glas, Tobias
Subject: Dalka, 140517286

Hey Tobias,

Here is the email we just sent to Mr. Dalka.

***** Email to **Ex. 6** ****

Reference # 140517286

Dear Mr. Dalka,

We will be covering the diagnosis charge only if you bring the vehicle into a VW dealer for diagnosis.

You would need to make an appointment with the dealer so that we can get a readout. We will then determine if we need a field representative to come and inspect the vehicle. If the repairs are deemed to be something that is not emissions related, we will not be assisting with any repairs.

If they are emissions components, the repairs could be covered under the emissions warranty. We will cover the diagnosis so that we can find out what is going on.

If you have any other questions, please feel free to contact me back.

Please let me know if you have any questions.

Thanks!

Ian Wigman

VWoA Customer CARE Center

VW Regional Case Manager

Volkswagen of America

3800 W. Hamlin Rd.

Auburn Hills, MI 48326

Phone 248 754-3213

Ian.Wigman@vw.com

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Snyder, Jim
Sent: Tue 7/29/2014 6:16:01 PM
Subject: Ex. 6

Thanks.

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Tuesday, July 29, 2014 2:14 PM
To: Snyder, Jim
Subject: Ex. 6

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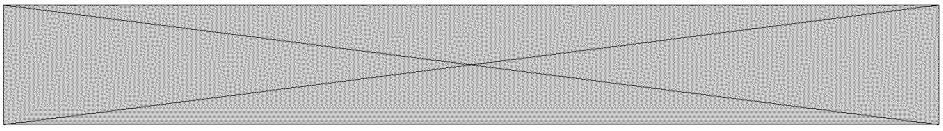
Ian.Wigman@vw.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Tue 7/29/2014 6:47:48 PM
Subject: VW Golf confirmatory test

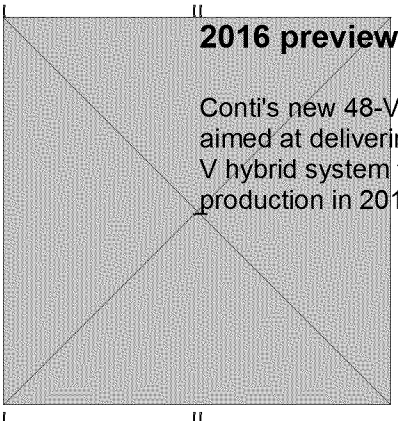
Bill, Just heard from the lab that they are having some problems loading the shift schedule. If they don't sort it out soon we won't get the vehicle prepped today and the vehicle won't test Wednesday. , If I hear something definitive this afternoon I will let you know. Otherwise I recommend calling Vince first thing in the morning to see if it will test Wednesday. He gets in at 6:00 .

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE International
Sent: Tue 7/29/2014 7:55:01 PM
Subject: SAE Hybrid & Electric Vehicles Technology eNewsletter July 2014

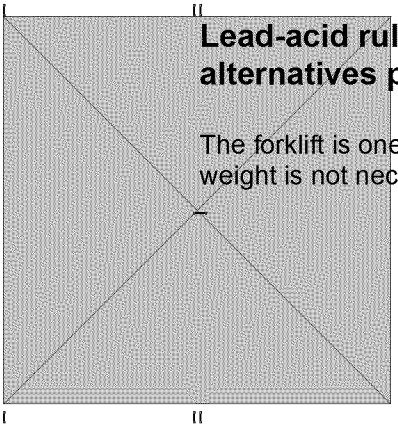


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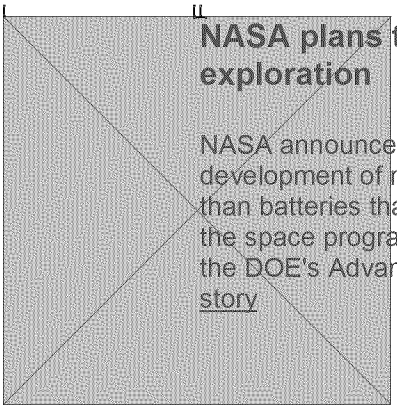
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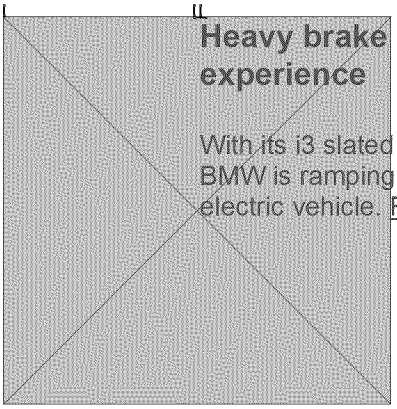
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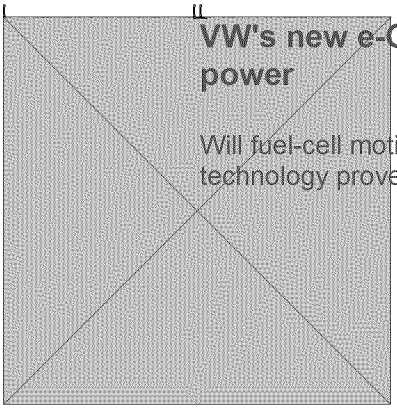
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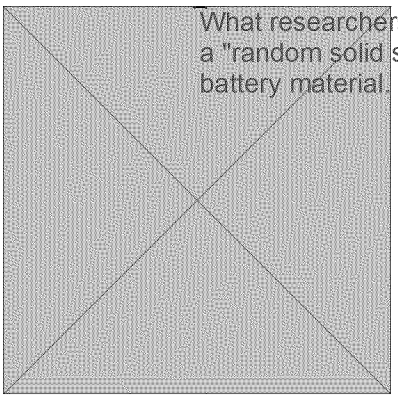
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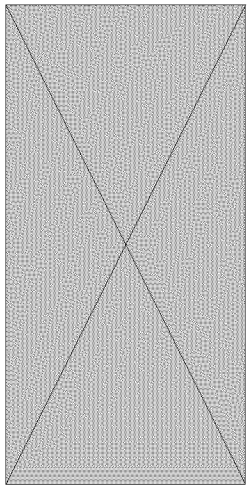
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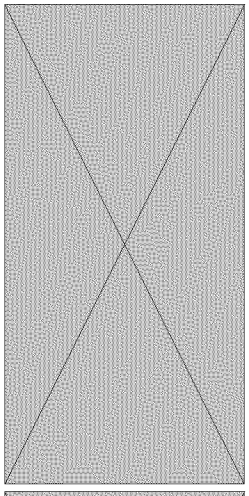
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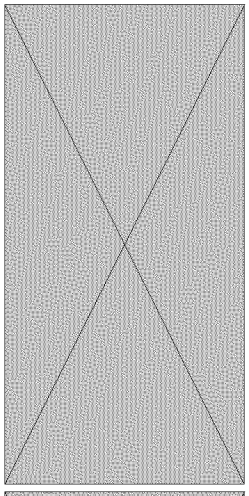
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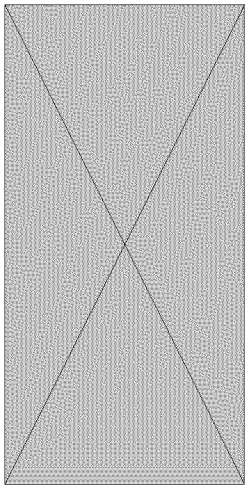
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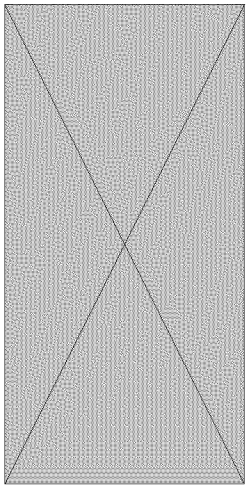
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- Electric Vehicle Global Technology Library is a web database of technical documents organized by topic and curated by SAE International, the leader in technical automotive information for over 100 years.









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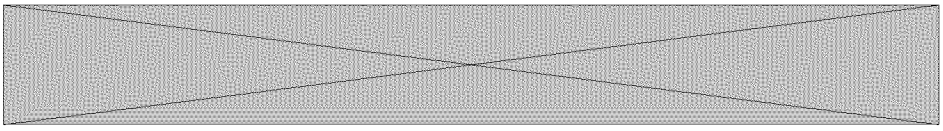
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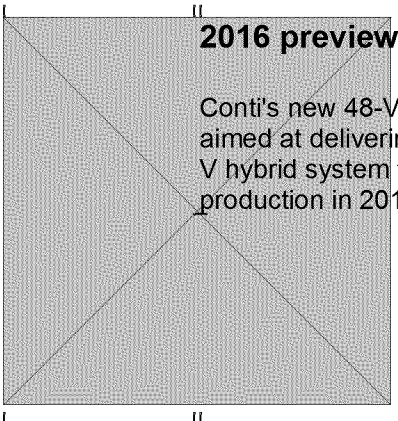
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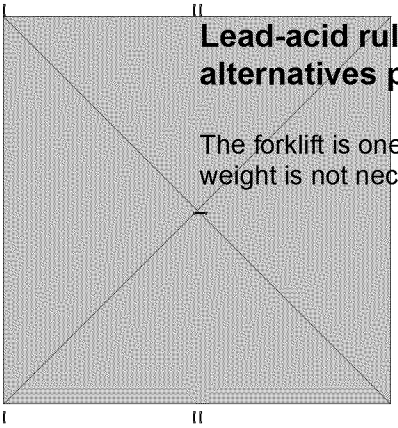


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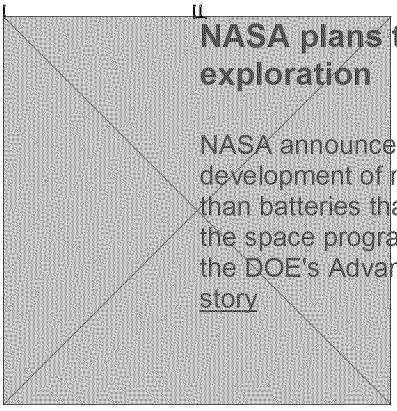
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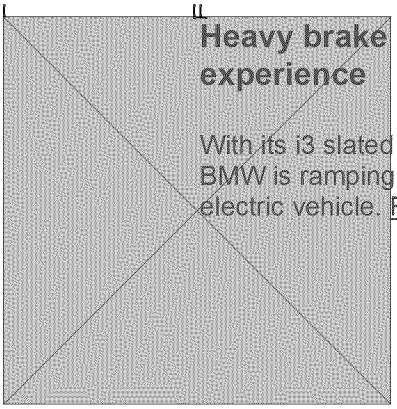
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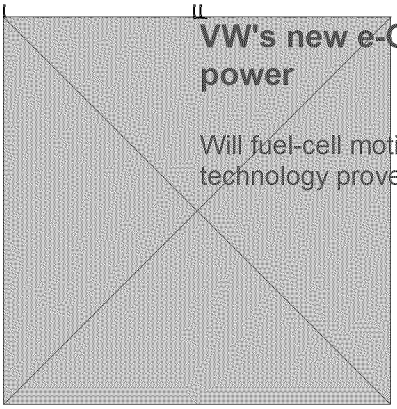
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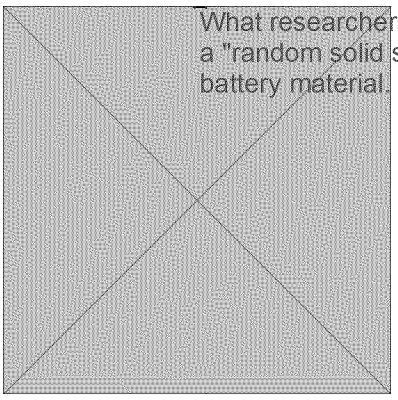


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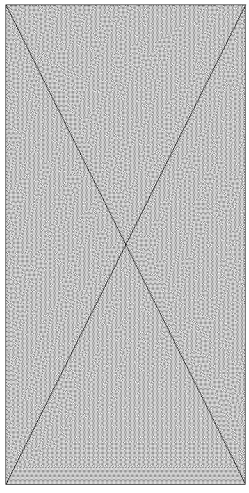
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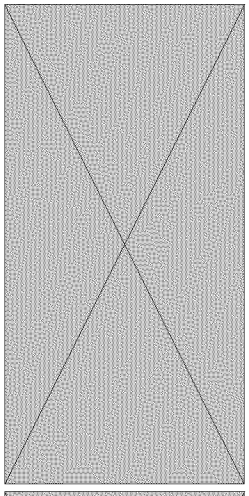
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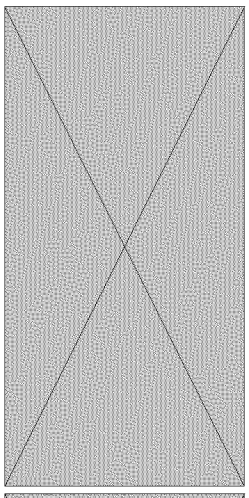
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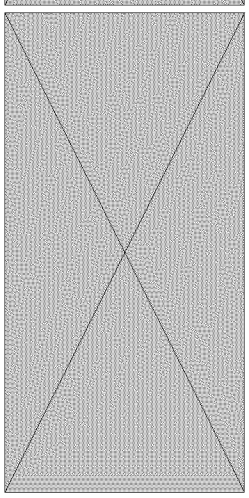
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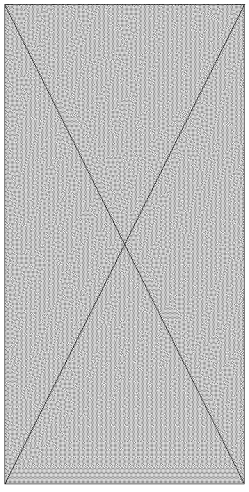
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- Electric Vehicle Global Technology Library is a web database of technical documents organized by topic and curated by SAE International, the leader in technical automotive information for over 100 years.









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2014 SAE Hybrid & Electric Vehicles Technology eNewsletter schedule: January, April, July, October

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.

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
From: Snyder, Jim
Sent: Tue 7/29/2014 9:39:15 PM
Subject: Golf offically not running Wednesday.

From the lab:

"Unfortunately, we have not yet solved the shift schedule transfer issue on the VW, so we know the test cannot take place tomorrow (Wednesday). TSC will keep trying, but the worst case is that it requires Bill Courtois' support"

-Jim

To: Ex. 7 @vw.com]
Cc: Ex. 7 @vw.com]; Ex. 7 Ex. 7 @vw.com]; Ex. 7 @vw.com]
From: Good, David
Sent: Tue 7/29/2014 11:33:44 PM
Subject: RE: Tier 3 1066 regs seem to require 48" single roll dynos - does VW still use twin 24" electric dynos?

Ex. 7

Thanks for checking on this for me.

I agree with you that although the Tier 3 Part 1066 regulations normally require single roll 48 inch diameter electric rolls, other dynamometers can be approved by EPA. So when the time comes, VW will need to request EPA approval to use your twin-roll 24 inch dynos under Part 1066.10(c) regulations.

I don't see any problems at this time----but the burden of proof will be on VW to demonstrate that your dynos are equivalent to single roll 48 inch diameter electric rolls.

Dave

From: Ex. 7 @vw.com]
Sent: Thursday, June 26, 2014 10:35 AM
To: Good, David
Cc: Ex. 7
Subject: RE: Tier 3 1066 regs seem to require 48" single roll dynos - does VW still use twin 24" electric dynos?

Hello Dave:

As you know, the VW Group has a number of test sites associated with the different brands. The Audi, Bentley and Lamborghini test sites use 48-inch dynamometers exclusively for emission certification. Volkswagen AG in Wolfsburg still has some smaller diameter twin-roll dynamometers.

I understand that during the rulemaking process (and beyond) the industry has discussed with EPA various aspects of the test procedures, including the specific reference to §1066.210 and the requirement regarding a minimum roll diameter of 120 cm. The use of twin-roll dynamometers was raised with EPA, and the EPA response from August 2012 was that the provisions of §1066.10(c) would apply to twin-roll dynamometers. I believe that Chris Laroo was the primary EPA contact for these discussions.

I also found the following when looking through the regulations; §1065.1(e) and §1066.1(f) include equipment specifications when identifying "procedures." From the regs:

Unless we specify otherwise, the terms ''procedures'' and ''test procedures'' in this part include all aspects of vehicle testing, including the equipment specifications, calibrations, calculations, and other protocols and procedural specifications needed to measure emissions.

Best regards,

Ex. 7

Ex. 7

Ex. 7

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

E-Mail: Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, June 20, 2014 10:21 AM
To: Ex. 7
Subject: Tier 3 1066 regs seem to require 48" single roll dynos - does VW still use twin 24" electric dynos?

Ex. 7

I was reading some of the Tier 3 regulations, and 40 CFR 1066.210 that the electric dynos have a minimum roll diameter of 120 cm (47.2 inches). As you know, manufacturers are required to use Parts 1065 & 1066 regulations beginning with the 2022 model year (some parts earlier).

About 10 years ago or so, I thought VW was using some twin roll 24" electric dynos.

Please double check on this when you get a chance, to see if you are still using any dynamometers other than the 48" (or larger) single roll. If so, do you plan to phase them out (or perhaps request to use them under 1066.10 and 1066.15 regs)? [It's not clear to me that 1066.10 and 1066.15 cover other "equipment"----they seem to discuss special test procedures and alternate test procedures only.]

Thanks

To: Good, David[good.david@epa.gov]
From: Sigelko, Jenny (EEO)
Sent: Tue 7/29/2014 11:34:34 PM
Subject: Automatic reply: Tier 3 1066 regs seem to require 48" single roll dynos - does VW still use twin 24" electric dynos?

Thank you for your email. I will have intermittent access to email July 29 & 30. Please allow extra time for a response. I will respond to your email as fast as possible.

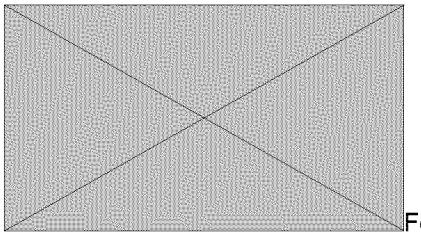
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 7/30/2014 8:00:28 AM
Subject: EPA Says Industry Ahead of CAFE Curve

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WardsAuto OEM Edition

July 30, 2014

Ford Super Duty May Get Higher Trim Level



Ford marketing manager Doug Scott says some Super Duty customers may want a trim level above the current top-of-the-line Platinum series.

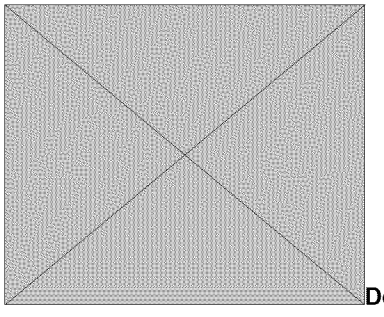
FULL ARTICLE

Lexus Sees Success With Less-Expensive GX

Lowering the price of the base grade for the GX's '14 refresh, by substituting fake leather for real leather and deleting some content, was key to this year's sales jump, a company official says.

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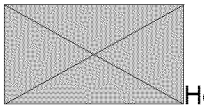
WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

Moldability
Ten years ago, we began publishing Protomold Design Tips to help product developers create better injection-molded plastic parts. We've covered materials, texture, draft, sink and many other design considerations. More than 100 tips later, we remain steadfast in our effort to continue informing designers and engineers in all areas of injection-molded part design. As a resource, we've gathered some of our most useful manufacturing advice from the past decade in a collection of essential tip s.

Autoline Daily

 Honda Up... Renault Down, Baidu Doing Automony? Don't Diss Dealer Franchise

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Improve passenger compartment and seat design with the improved SAE International H-Point Machine The HMP-II defines and locates the standard seating reference point and offers additional leg, shoe, and pedal reference points; lumbar support measurement; easier installation over the SAE HPM-I. Ideal for advanced design/research applications. See video here.

EPA Says Industry Ahead of CAFE Curve

"What we are finding is manufacturers are not only bringing technology in faster than we thought they would, they are also bringing different technology to fruition than what we anticipated," says the EPA's Michael Olechiw.

FULL ARTICLE

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The race to 54.5 mpg by 2025 is on.

ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

Global Automakers May Abandon Russian Production

One analysis suggests limited capacity, possible loss of government support, devaluation of the ruble and other factors may prompt global automakers to halt assembly operations in Russia and instead focus on imports.

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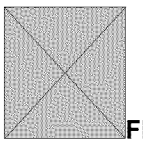
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Chevy Cruze Diesel Caught in Game of Catch Up



FINAL INSPECTION BLOG

According to *WardsAuto* data, the Cruze diesel has accounted for 5,974 deliveries since its launch one year ago. That's a scant 2.0% of the compact sedan's powertrain mix.

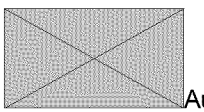
FULL ARTICLE

Ford Posts $2.6 Billion Pre-Tax Profit; Europe Shows Signs of Life

Ford posts a $14 million pretax profit in Europe where the auto industry has seen sales stagnate, but expresses concerns over the Russian market.

FULL ARTICLE

VideoWire



Audi Drives Itself; CR Wants Camry Hybrid Recalled; Ford Sets '15 F-150 Prices

Gallery: Spotted at Dearborn Maker Faire 2014

The Henry Ford in Dearborn, MI, hosted its fifth annual Maker Faire Detroit this past weekend in highlighting the importance of grassroots innovation and problem-solving. Some 400 creators participated in this year's event, including 100 for the first time.

GM Expects Profit-Busting Recalls to Slow; $400M Set Aside for Victims

The earnings swoon also reflected difficulties in international markets, specifically South America, where economic headwinds are affecting sales, and in Europe, where GM continues to book losses as it restructures its business.

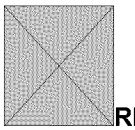
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Dealers Blamed for Dismal EV Market



RETAIL FRONT BLOG

If Tesla were convinced the existing dealer infrastructure was truly motivated and capable of selling its cars, then this dust-up and threats of litigation never would have occurred.

FULL ARTICLE

Cruze Diesel Impressive Effort Against Germany's Best

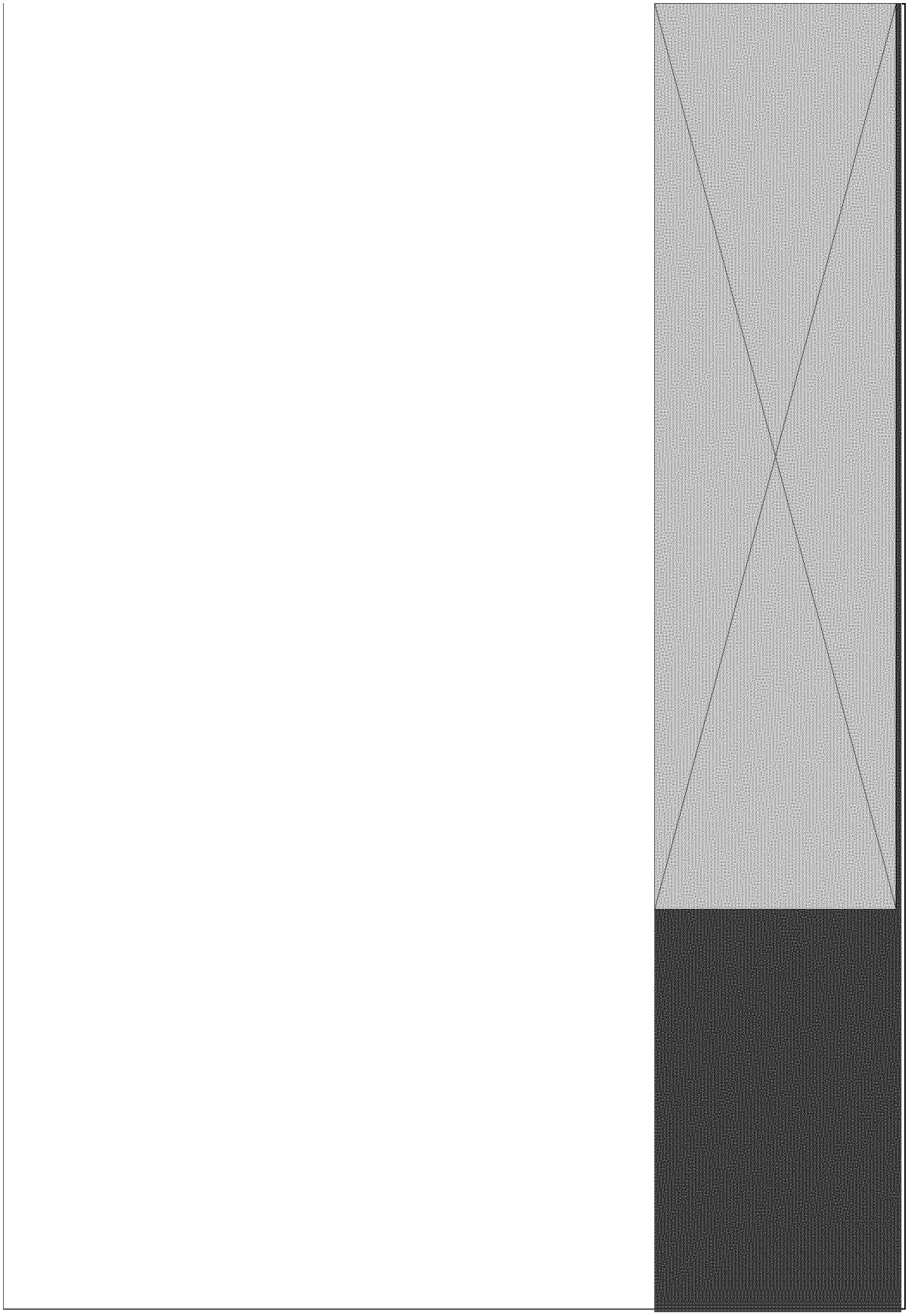
Clearly it will take time to find a following like VW has developed over decades in the U.S. But as far as the engine itself is concerned, the GM 2.0L turbodiesel is a strong start.

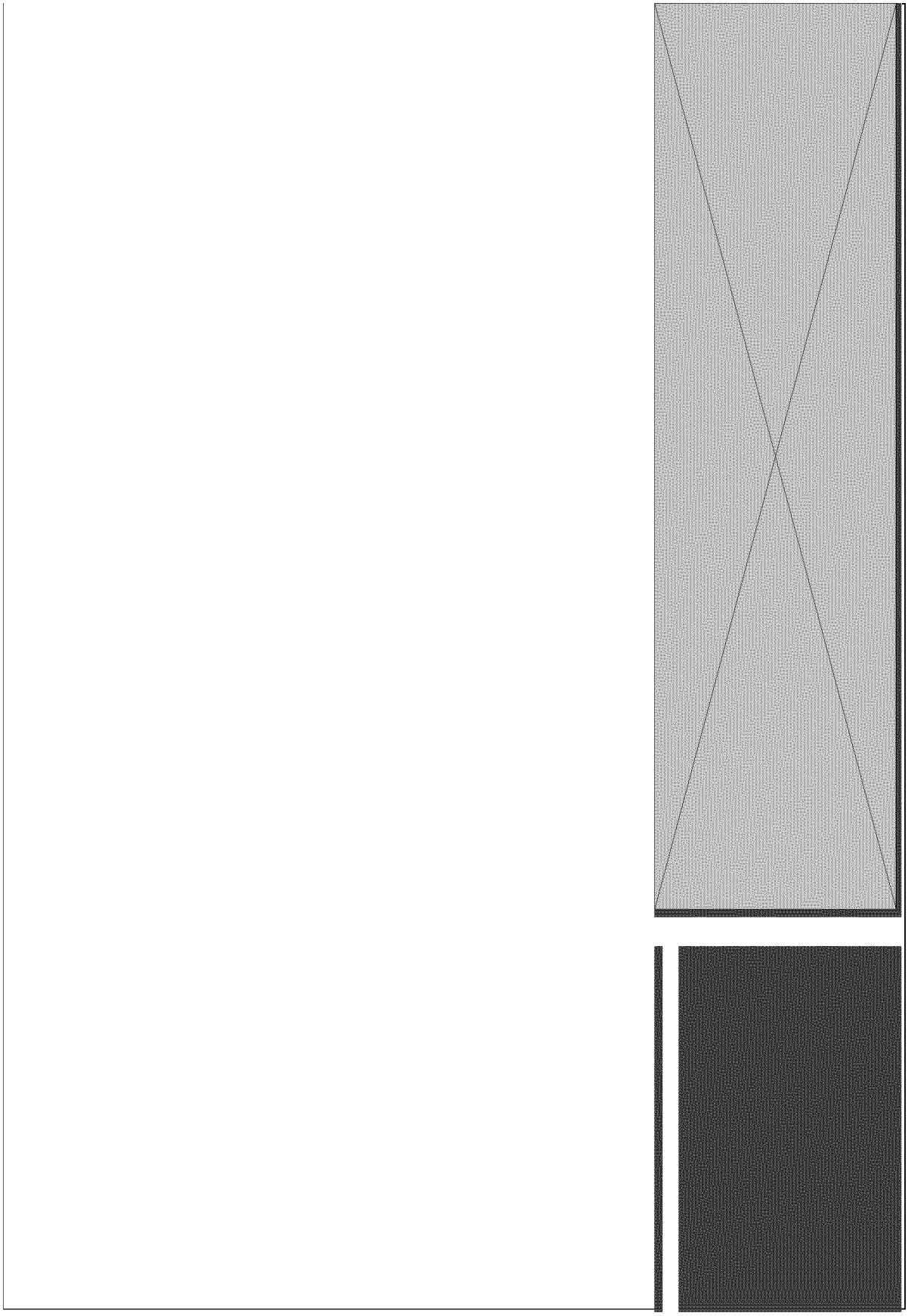
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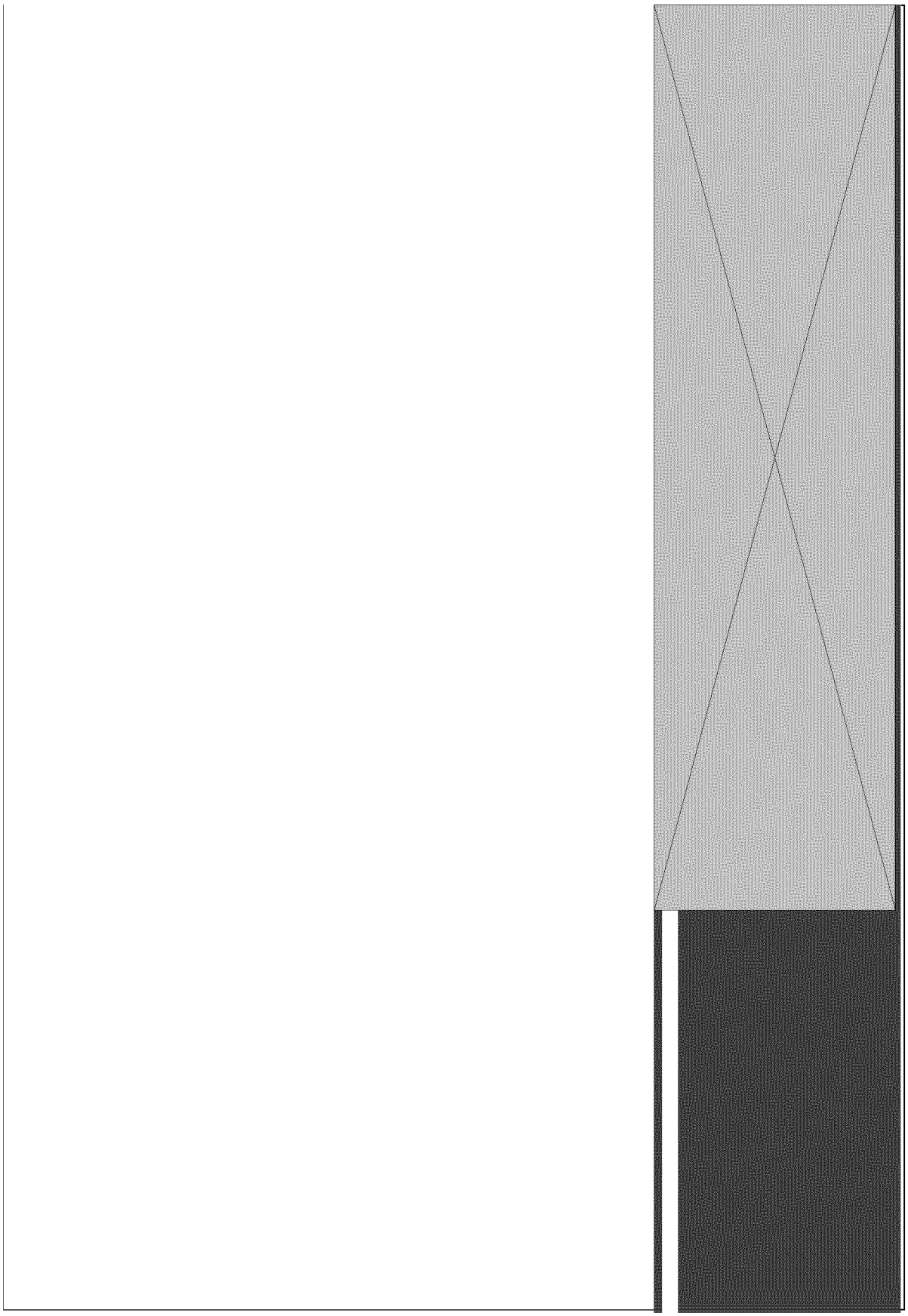
WardsAuto Wins Editorial, Design Excellence Awards

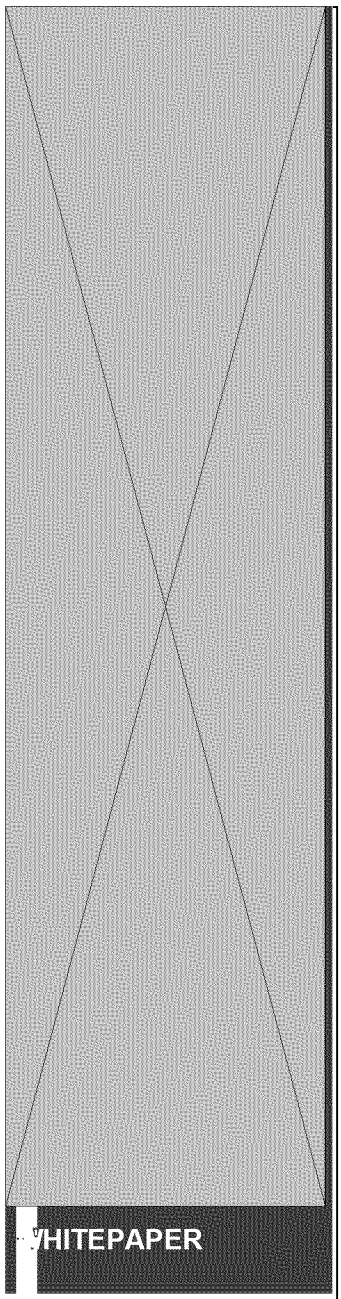
WardsAuto's website, feature articles, commentaries, magazines and apps garner acclaim from the American Society of Business Publication Editors in this year's Azbees.

FULL ARTICLE





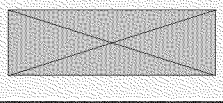
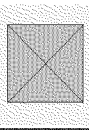
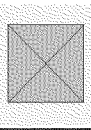
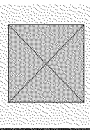
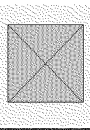
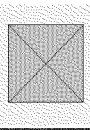




Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

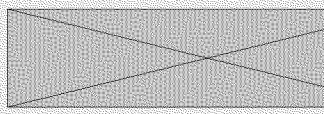
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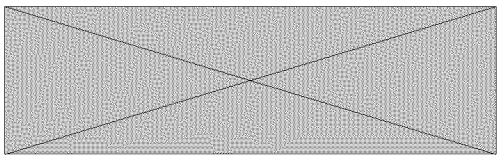
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 7/30/2014 1:01:43 PM
Subject: A.M. NEWSCAST: Toyota keeps slim global sales lead over VW | Fiat net falls 55% | GM, Chrysler ignition-switch lawsuits | Volt beats Leaf in tough crash test

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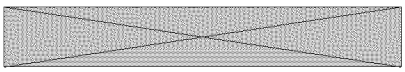
July 30, 2014



Toyota fends off VW »

Fiat net profit falls 55% »

Volt beats Leaf in test »



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. .

To: Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]
From: Ex. 7
Sent: Wed 7/30/2014 1:21:59 PM
Subject: 2015 Audi RS7 Relabeled

Hi Dave;

Thanks for the discussion this morning. Because we were unable to determine a predominate mode of use for the driver selectable transmission modes, we have relabeled the 2015 Audi RS7 equipped with the 560 HP twin turbo 4.0L V8 engine. These relabeled lower label fuel economy values are derived from test results in the "S" transmission mode and then averaged together with the "D" mode at the required 50/50 weighting. The new lower label values are in production now and dealers holding 2015 Audi RS7 models will get replacement labels. This model has no gas guzzler tax required after this relabeling.

There were 17 units already sold and we do not plan to make any notification to these retail customers announcing any new values and see no regulatory obligation to do so, although we understand that any notification to owners would be optional. Please respond to this mail with your concurrence regarding notification to these 2015 Audi RS7 owners.

Best regards,

Ex. 7

Ex. 7

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

Fax:

mailto:

Ex. 7

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Schlueter, Hannah (EASZ/1)[hannah.schlueter@volkswagen.de]; Giles, Michael (EEO)[michael.giles@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Wright, DavidA
Sent: Wed 7/30/2014 7:55:03 PM
Subject: RE: Golf TDI M6 testing

Greg,

I not able to answer your questions at this time, Vince and/or I will get back with you tomorrow morning after our morning meeting with the laboratory.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Wednesday, July 30, 2014 3:10 PM
To: Wright, DavidA
Cc: Schlueter, Hannah (EASZ/1); Giles, Michael (EEO); Rodgers, William (EEO)
Subject: FW: Golf TDI M6 testing

Hello David,

In Jims absence, can you assist with the questions below?

Thanks.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Allen, Gregory (EEO)
Sent: Wednesday, July 30, 2014 3:06 PM
To: snyder.jim@epa.gov
Cc: Giles, Michael (EEO); Rodgers, William (EEO); Thomas, Richard (EEO)
Subject: Golf TDI M6 testing

Hello Jim,

Is there a status update on the shift schedule issue that you can give us? I've tried to call Vince a few times, but have been unsuccessful in reaching him.

Ex. 4, 7

Ex. 4, 7

Feel free to give myself or Mike Giles a call to discuss.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

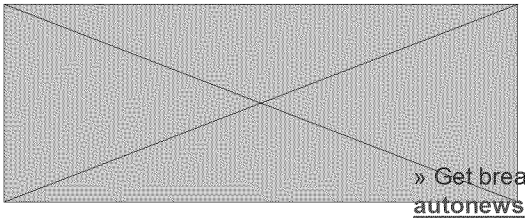
(248)754-4209

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 7/30/2014 8:46:32 PM
Subject: DAILY: Fiat targets improved Chrysler margins to meet '14 profit goal | VW closes gap with Toyota | Redesigned Mercedes C-class sedan packed with new tech | Hyundai, Chrysler announce new recalls

Today's most read story

Small cars struggle in latest round of IIHS crash tests

July 30, 2014



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TOP NEWS

Fiat targets improved Chrysler margins to meet '14 profit goal

UPDATED: 7/30/14 2:17 pm ET - adds CFO comments
5:33 am U.S. ET | Jul 30

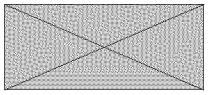
Fiat plans to review leasing and incentive practices in North America to boost margins and meet global full-year earnings targets after second-quarter operating profit in the region fell 18 percent, despite a 7 percent rise in sales. ... » READ

VW closes gap on Toyota's global sales lead

2:02 am U.S. ET | Jul 30

Volkswagen is closing in on Toyota as the global leader in vehicle sales, with a rapid expansion drive in China while Toyota curbs growth to focus on shoring up quality. ... » READ

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Redesigned Mercedes-Benz C-class sedan packed with new tech

10:38 am U.S. ET | Jul 30

Mercedes-Benz is vying for the luxury compact crown with the redesigned 2015 C-class sedan, equipped with new technology and features trickled down from the S-class flagship. ... » READ

Toyota luxury boss says sub-$30K car 'wouldn't be a Lexus'

3:10 pm U.S. ET | Jul 30

A senior Lexus executive said that a car priced below $30,000 would not be worthy of the brand, in an indirect dig at German rivals who have been moving downmarket. "We could go down and build a car under $30,000, but it would be decontented, and you'd be cutting corners. ... » READ

GM resumes pickup output at Indiana plant

UPDATED: 7/30/14 3:56 pm ET - adds details

12:53 pm U.S. ET | Jul 30

Production resumed today at one of GM's three pickup plants after being idled because of an interruption in sheetmetal supplies, the company said. ... » READ

BEST PRACTICES

'Middle of nowhere' site limits store's costs

12:01 am U.S. ET | Jul 28

the rural location of Volkswagen of Salem County in Monroeville, N.J., helps the family contain its real estate costs. That freed time and money to focus on building the store's sales to roughly 28 new and 43 used vehicles per month from the 8 to 15 mostly new vehicles per month that the previous owners sold. ... » READ

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Ford, FBI investigating former engineer for possible espionage

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Ford hikes revamped F-150 pickup prices as much as $3,615

ZF's pursuit of TRW may spark wave of mergers in supply chain

Small cars struggle in latest round of IIHS crash tests

UPDATED: 7/30/14 12:02 pm ET - adds more overall results

12:01 am U.S. ET | Jul 30

GM sued over deaths, injuries linked to ignition switch

10:14 pm U.S. ET | Jul 29

Kia hints at next Sorento with design sketches

9:58 pm U.S. ET | Jul 29

Audi CEO vows efficiency drive to enhance margins, report

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For
» Nov. 13-14 - Automobilwoche Kongress
» January 13-14 - Automotive News World Congress
» January 22 - Automotive News Retail Forum

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says

2:45 pm U.S. ET | Jul 30



Germany's ZF in advanced talks to buy TRW for near $12 billion, report says

UPDATED: 7/30/14 4:22 pm ET - adds stock close

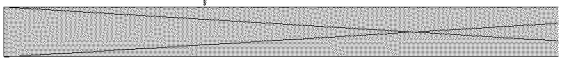
1:22 pm U.S. ET | Jul 30



Hyundai recalls 883,000 Sonata sedans to repair transmission-shift cable

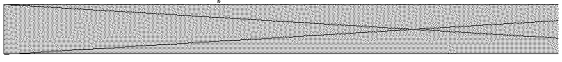
UPDATED: 7/30/14 2:40 pm ET - adds details

8:06 am U.S. ET | Jul 30



Marchionne says he is open to new alliances but won't sell Alfa Romeo

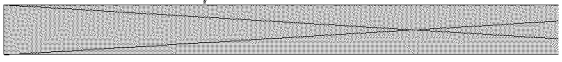
11:10 am U.S. ET | Jul 30



Penske Q2 net income rises 18% on strong gains in all segments

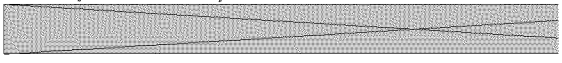
UPDATED: 7/30/14 4:02 pm ET - adds details, link

7:30 am U.S. ET | Jul 30



Jaguar touts aluminum features on upcoming XE

12:35 pm U.S. ET | Jul 30



Automakers seek delay on pedestrian-alert systems for hybrids, EVs

3:18 pm U.S. ET | Jul 30



Land Rover preps Discovery Sport with room for 7

10:33 pm U.S. ET | Jul 29

Mitsubishi's quarterly profit gains paced by Europe

4:14 pm U.S. ET | Jul 30

Mercedes-Benz violated Alabama workers' organizing rights, judge rules

UPDATED: 7/29/14 5:32 pm ET - adds background

4:52 pm U.S. ET | Jul 29

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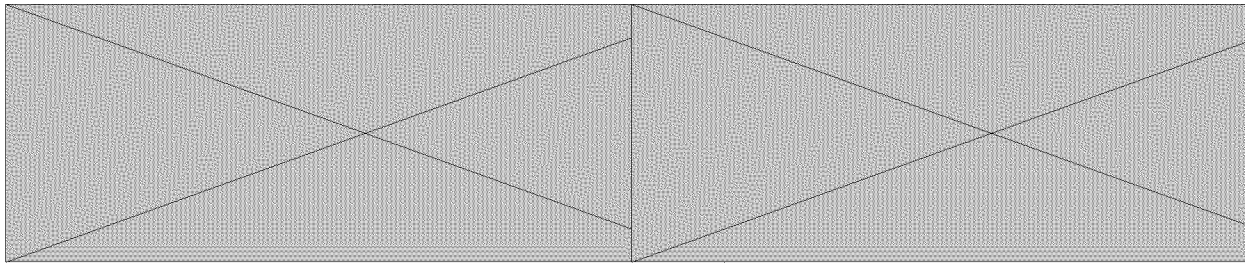
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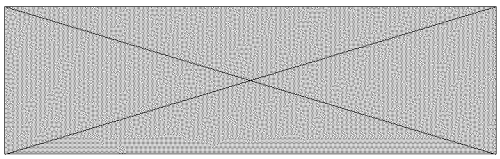
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From: Automotive News
Sent: Thur 7/31/2014 1:08:04 PM
Subject: A.M. NEWSCAST: Tesla-Panasonic 'giga' team | VW profit down, Subaru and Mazda up | NY used-car crackdown | Snyder: July sales on course

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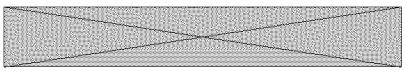
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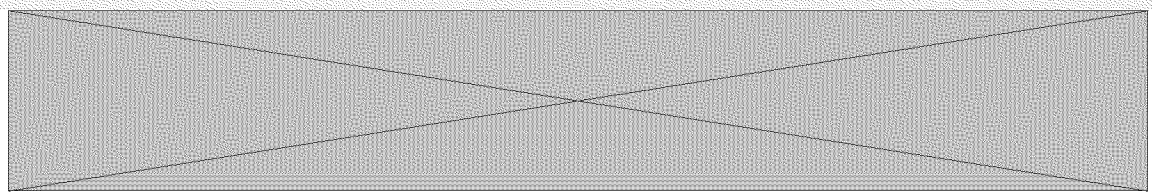
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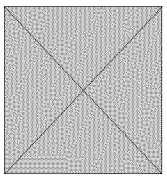
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From: Green Car Reports
Sent: Thur 7/31/2014 4:06:08 PM
Subject: Green Car Report Daily Headlines

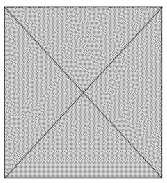
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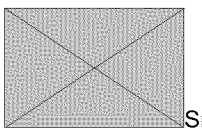
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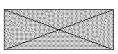
Volt And Leaf Crash Tests, Cruze Diesel Sales, Tesla Gigafactory Pact: Today's Car News

Jul 31, 2014 03:33 pm | feedback@highgearmedia.com (John Voelcker)

 Small cars and the new IIHS small-overlap crash test: How'd they do? We look at lousy sales of GM's first diesel passenger car in 28 years, a higher-efficiency model of the 2015 Ford F-150 pickup truck, and of course there's a Tesla story to lead off the day. All this and more on Green Car Reports. Tesla and Panasonic announced they have signed a...

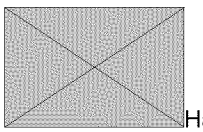
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Riding The Harley-Davidson LiveWire Electric Motorcycle: News Video

Jul 31, 2014 03:26 pm | feedback@highgearmedia.com (John Voelcker)

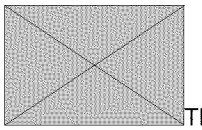
 Harley-Davidson may be the most traditional of motorcycle makers. But it's now taken a huge leap into a greener future with its LiveWire electric motorcycle concept. Recently, our writer Ben Rich rode it--and reported on what it's like. This is Green Car Reports'

video news for the week of July 28, 2014. DON'T MISS: Harley-Davidson Livewire...

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Chevy Cruze Diesel Sales: Mediocre At Best, So Far

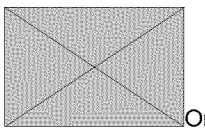
Jul 31, 2014 02:13 pm | feedback@highgearmedia.com (John Voelcker)

 The 2014 Chevrolet Cruze Diesel went on sale almost a year ago, the first diesel passenger car sold by General Motors in 28 years. Hopes were high for the Cruze with the European turbodiesel engine, which effectively competed with the long-established Volkswagen Jetta TDI, the only other mainstream compact sedan fitted with a diesel. But of...

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IIHS Tests Small Cars On Small Overlap: Volt Does OK, Leaf 'Struggles'

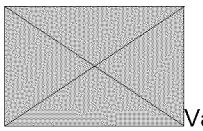
Jul 31, 2014 01:25 pm | feedback@highgearmedia.com (Antony Ingram)

 One of the toughest crash tests a car can face is the new small-frontal-overlap, introduced by the Insurance Institute for Highway Safety in 2012. By crashing a vehicle so that only 25 percent of its front end contacts the barrier, far greater forces are transmitted through the car than in a typical offset crash test. The Nissan Leaf, Chevrolet...

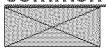
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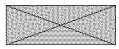
2015 Ford F-150 SFE: Highest Gas Mileage Model For Aluminum Pickup

Jul 31, 2014 12:52 pm | feedback@highgearmedia.com (John Voelcker)

 Various details have already been released about the radical new 2015 Ford F-150 pickup truck, the first-ever to use an all-aluminum body to reduce weight and improve fuel efficiency. Now another piece of information has leaked out: Ford will offer an F-150 SFE model, a special option package that boosts fuel economy ratings slightly higher than...

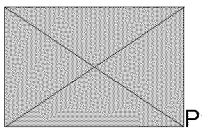
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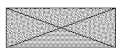
2016 Audi A3 e-tron: First Drive

Jul 31, 2014 11:00 am | feedback@highgearmedia.com (Bengt Halvorson)

 Plug-in hybrids like the 2016 Audi A3 e-tron—especially those with well-tuned responses and zippy performance—are the evangelists that have the best chance of converting the masses to the joys of all-electric motoring. Yes, electric-car fans, please set aside your all-the-way-or-nothing thinking for the moment. On one side, the A3...

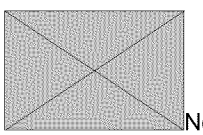
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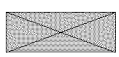
Tesla, Panasonic Sign Gigafactory Pact; Nevada Site Work Already Underway?

Jul 31, 2014 10:54 am | feedback@highgearmedia.com (John Voelcker)

 Now it's official: Panasonic and Tesla Motors will build the "gigafactory," a huge lithium-ion cell fabrication and battery-pack production facility in the western United States. Today Tesla will report its second-quarter earnings after the market closes, and CEO Elon Musk was bound to face questions about the progress of the massive plant. Right...

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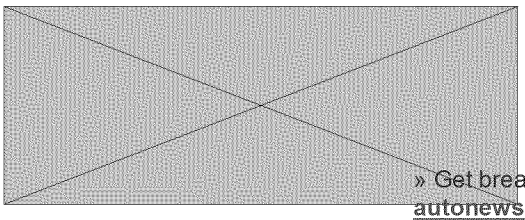
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Subject: DAILY: GM missed red flag from rental car firms | GM, too, removes parts to weigh pickups, boost payload ratings | An imported Buick Regal? | Fiat investors likely to OK Chrysler merger

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Tesla, Panasonic agree to team on U.S. gigafactory

July 31, 2014



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THE GM RECALL

GM missed red flag from rental car firms on fatal crashes

12:23 pm U.S. ET | Jul 31

More than seven years before GM began the biggest wave of auto recalls in history, an investigator for Vanguard Car Rental contacted the carmaker about a fatal rollover crash in California. Vanguard wasn't alone. ... » READ

GM, too, removes parts to weigh pickups, boost payload ratings

UPDATED: 7/31/14 4:04 pm ET - updates Ford practice
7:09 pm U.S. ET | Jul 30

GM says it deletes heavy items such as the rear bumper from certain pickups when it weighs them in order to boost the vehicles' maximum payload ratings. GM says it adopted the practice for the 2014 model year in response to competitive pressures as it launched redesigned full-sized pickups. ... » READ

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Fiat investors likely to approve Chrysler merger

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Fiat shareholders will likely approve the automaker's merger with Chrysler when they meet in Italy for the last time on Friday. Industry watchers expect Fiat to win the two-thirds majority vote needed for a merger. ...

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VW profit falls in Q2 amid emerging-market troubles

UPDATED: 7/31/14 10:33 am ET - adds U.S. Q2 sales

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Volkswagen said operating profit declined 3.1 percent in the second quarter as U.S. sales fell and emerging-market volatility weighed on earnings. ... » READ

Tesla, Panasonic agree to team on U.S. gigafactory

7:02 am U.S. ET | Jul 31

Tesla Motors and Panasonic have agreed to cooperate on the construction and operation of the American carmaker's so-called gigafactory, its envisioned large-scale battery manufacturing plant in the United States. ... » READ

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ZF's pursuit of TRW may spark wave of mergers in supply chain

Mazda, Subaru profit from strong U.S. sales amid downturn in Japan

UPDATED: 7/31/14 12:59 pm ET - adds U.S. details

10:43 am U.S. ET | Jul 31

Lexus' plans exclude China plant

5:13 pm U.S. ET | Jul 30

Future car colors inspired by Midwest homes, landscape, BASF says

1:38 pm U.S. ET | Jul 31

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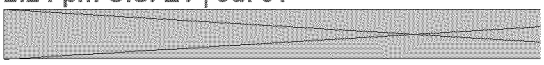
fixing Toyota parts prices

4:02 pm U.S. ET | Jul 31



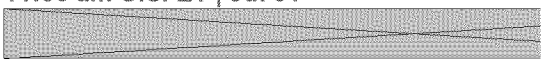
BorgWarner net income up 9% for Q2 as engine division grows

2:24 pm U.S. ET | Jul 31



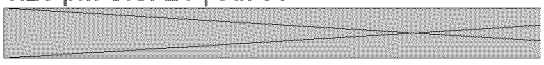
Delphi reports strong Q2 profit, but next quarter may disappoint

11:36 am U.S. ET | Jul 31



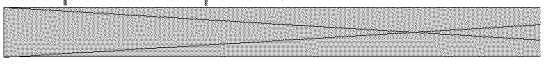
Denso's quarterly profit falls on Japan labor costs, compact car shift

1:28 pm U.S. ET | Jul 31



Superior's Q2 net income drops 21%; Ark. plant to close

3:17 pm U.S. ET | Jul 31

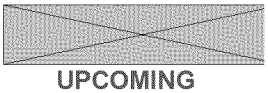


Chrysler recalls nearly 30,000 Fiat 500L cars for airbag glitch

4:28 pm U.S. ET | Jul 30

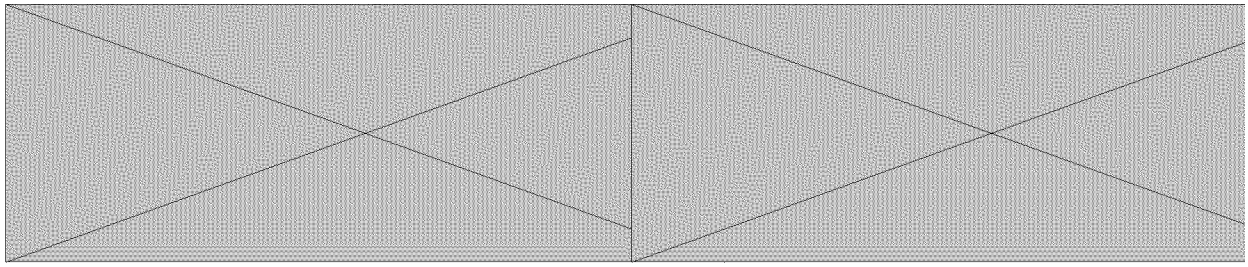


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Cc: Ex. 7 @volkswagen.de]; Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 @vw.com]; Spieth, John[Spieth.John@epa.gov]; Ex. 7
From: Wright, DavidA
Sent: Thur 7/31/2014 9:14:22 PM
Subject: RE: Ex. 4 - CBI

Mike,

Ex. 4 - CBI

Ex. 4 - CBI

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Ex. 7 @vw.com]
Sent: Thursday, July 31, 2014 4:09 PM
To: Wright, DavidA
Cc: Ex. 7
Subject: RE: Ex. 4 - CBI

Hello David,

Thanks again for your overall support and quick reply.

Ex. 4 - CBI

We will follow up tomorrow. Please keep us advised of any new information as it becomes available.

Thanks

Ex. 7

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Thursday, July 31, 2014 3:34 PM
To: Ex. 7
Cc: Ex. 7
Subject: RE: Ex. 4 - CBI

Ex. 7

Ex. 4 - CBI

We apologize for the issue with t Ex. 4 - CBI into our system and regret that this will delay Hannah from returning to Germany for an additional week.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Giles, Michael (EEO) [mailto:michael.giles@vw.com]
Sent: Thursday, July 31, 2014 3:24 PM
To: Wright, DavidA
Cc: Schlueter, Hannah (EASZ/1); Snyder, Jim; Allen, Gregory (EEO)
Subject: RE: Ex. 4 - CBI

Hi David,

Just a quick follow up – any feedback you could provide on the status of discussions for the Ex. 4 - CBI would be appreciated.

Thanks,

Ex. 7

From: Ex. 7
Sent: Thursday, July 31, 2014 11:31 AM
To: 'Wright, DavidA'
Cc: Ex. 7
Ex. 7 @vw.com)
Subject: RE: Ex. 4 - CBI

Hello David,

Thanks for making time in your schedule for the meeting this morning.

Hannah asked me to answer a question of whether we had any Ex. 4 - CBI Ex. 4 - CBI The answer to this question is no.

Ex. 4 - CBI

Regards

Ex. 7

From: Ex. 7
Sent: Thursday, July 31, 2014 10:03 AM
To: 'Wright, DavidA'
Subject: RE: Ex. 4 - CBI

Thanks again for the follow up David. Hannah will be there at 10:30.

We set up a dial in number here so our office can participate:

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+1 (248) 754-6400

Conference ID: Ex. 6

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Wednesday, July 30, 2014 3:55 PM
To: Ex. 7
Cc: Ex. 7
Subject: RE: Ex. 4 - CBI

Ex. 7

I not able to answer your questions at this time, Vince and/or I will get back with you tomorrow morning after our morning meeting with the laboratory.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Ex. 7 @vw.com]
Sent: Wednesday, July 30, 2014 3:10 PM
To: Wright, DavidA
Cc: Ex. 7
Subject: FW: Ex. 4 - CBI

Hello David,

In Jims absence, can you assist with the questions below?

Thanks.

Regards,

Ex. 7

From: Ex. 7
Sent: Wednesday, July 30, 2014 3:06 PM
To: snyder.jim@epa.gov
Cc: Ex. 7
Subject: Ex. 4 - CBI

Hello Jim,

Is there a status update on the Ex. 4 - CBI that you can give us? I've tried to call Vince a few times, but have been unsuccessful in reaching him.

Ex. 4 - CBI

Ex. 4 - CBI we were just wondering this so that way we can keep our timeline as close as possible to what we originally had planned for testing.

Feel free to give myself or Ex. 7 a call to discuss.

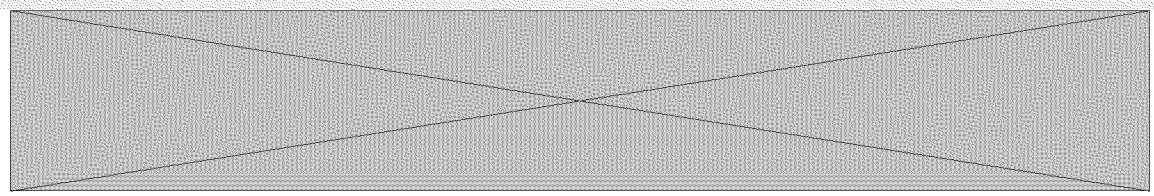
Thanks Jim.

Regards,

Ex. 7

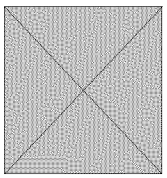
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Fri 8/1/2014 4:04:38 PM
Subject: Green Car Report Daily Headlines

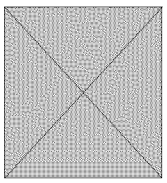
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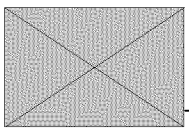
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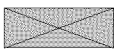
July Electric-Car Sales, Tesla Gigafactory Site, BMW i3 Fuel Cell: Today's Car News

Aug 01, 2014 03:40 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Plug-in electric car sales for July are coming in, Tesla breaks ground at a "potential" Gigafactory site, and will there be a hydrogen fuel-cell version of the BMW i3? All this and more on Green Car Reports. Tesla's quarterly earnings report reveals sales numbers and groundbreaking at a "potential" Nevada Gigafactory...

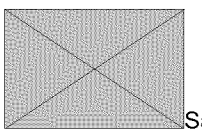
comments | read more





Plug-In Electric Car Sales In July: Leaf, Volt Both Do Well

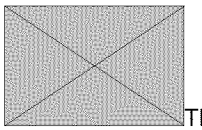
Aug 01, 2014 01:34 pm | feedback@highgearmedia.com (John Voelcker)

 Sales of plug-in electric cars in the U.S. continued their rise in July, as Nissan delivered more than 3,000 Leaf battery electric cars and Chevy more than 2,000 Volt range-extended electrics. It's was only the second time that the two cars together have sold more than 5,000 units in a single month; the first was last August, when 5,771 were...

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Fisker Karma Finnish Production To Resume Following Fixes, New Model Later

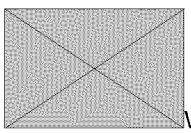
Aug 01, 2014 12:30 pm | feedback@highgearmedia.com (John Voelcker)

 The new owners of the Fisker luxury car brand will resume production of the Karma range-extended electric sedan initially at a contractor's factory in Finland--but not until the company has fixed "about 250 bugs" in the vehicle. The news came as executives of Wanxiang, China's largest auto parts maker and now the owner of both Fisker and its...

comments | read more

Diesel Luxury Sedans: Audi, BMW, Mercedes Face Off, Mazda Still Missing

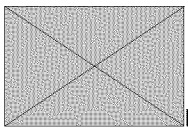
Aug 01, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 While gasoline power units have seen incremental improvements over the last few decades, diesels seem to have shot up from relative obscurity straight to the big time. Sales still lag their gasoline counterparts but performance, refinement and driveability are all more than competitive, and economy can be a long way ahead. That's as much the case...

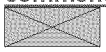
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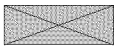
BMW i3 To Get Fuel Cell Version With Toyota Tech?

Aug 01, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 In 2015, Japanese automaker Toyota will make a fuel-cell vehicle available to the public. It has worked on the project with German firm BMW, itself planning a fuel-cell vehicle--and that vehicle could now be a fuel-cell version of the i3 electric car. According to Motoring, Toyota USA's advanced vehicle boss, Craig Scott "intimated strongly" that...

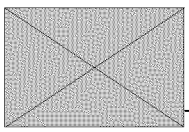
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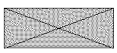
Tesla: 8,763 Cars Built, 7,579 Sold, 'Potential' Nevada Gigafactory Ground Broken: Q2 Earnings Report

Jul 31, 2014 08:53 pm | feedback@highgearmedia.com (John Voelcker)

 Tesla Motors built 8,763 Model S electric cars and delivered 7,579 of them to customers during the second quarter, according to just-released second-quarter results. It expects to build about 9,000 cars this quarter, and deliver 7,800, largely due to a two-week production shutdown for retooling at its factory in Fremont, California--which cost it...

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Update your profile

To: Ex. 7 @vw.com]
Cc: Ex. 7 @vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Fri 8/1/2014 9:51:50 PM
Subject: 2013 VW Group CAFE/GHG Report

Ex. 7

I looked in Verify for your 2013 CAFE GHG reports and found two letters dated 3/17/2014--- one for cars and one for trucks. The letters have some calculation information (but don't use the EPA templates like the 2012 VW CAFE/GHG report did) and don't mention anything about AC credits, provide the SAE J2727 A/C leakage worksheets, off cycle credits, CH4 & N2O debits, etc.

The letters are also missing the summary pages of GHG fleet average credits/debits, A/C credits, total credits for the 2013 model year. Most manufacturers also include an AB&T page (like the EPA GHG template) which tallies up the credits/debits for the 2009-2013 model years.

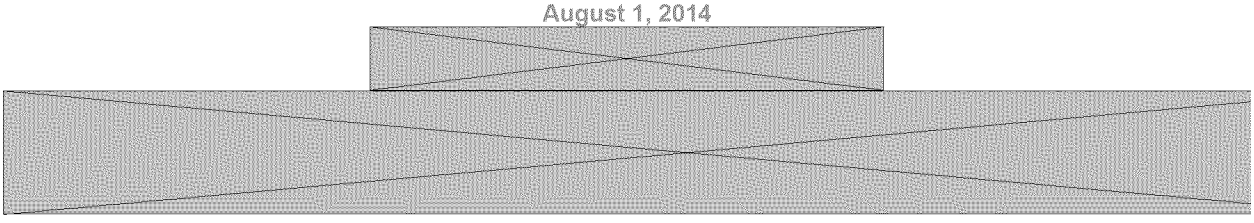
Both of the 3/17/2017 letters indicate that "Volkswagen intends to provide additional information required by 86.1865-12 by May 1, 2014."

Please email me a copy of the "additional information" letters for cars and trucks and enter a pdf copy of them in Verify's document module when you get a chance.

Thanks

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/1/2014 10:38:37 PM
Subject: U.S. SALES REPORT: July generates solid gains for (almost) everyone - Toyota, Lexus pass rivals; rising incentives stoke concern

August 1, 2014



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July's gist: Gains for (almost) everyone

Toyota, Lexus pass rivals; rising incentives stoke concern

4:26 pm U.S. ET | Aug 1

U.S. auto sales rose 9 percent in July to 1.4 million units, a fifth strong month to ease the memory of harsh winter storms that blunted January and February volume. On the day that shareholders approved the merger that formally creates Fiat Chrysler Automobiles, Chrysler Group posted a 20 percent U.S. sales gain to lead all major players. ...
» READ



Toyota Motor advances 12% for best July in 7 years

Lexus up 19% but Scion slips 18%

4:24 pm U.S. ET | Aug 1

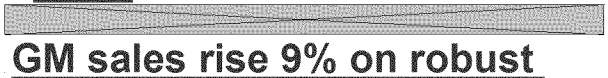
Sales at Toyota Motor Sales rose 12 percent in July from a year earlier to 215,802 vehicles, for the automaker's best July sales in seven years as core models posted big gains.
... » READ



Nissan deliveries climb 11%, set July record

3:44 pm U.S. ET | Aug 1

Nissan North America sold 121,452 vehicles in the United States in July, a gain of 11 percent from the year-ago month, giving Nissan a monthly record for July. Nissan has set corresponding monthly records each month this year.
... » READ



GM sales rise 9% on robust commercial-fleet sales, SUV demand



ON THE BLOGS

JESSE SNYDER

An impressive streak, locked and still going





1:03 pm U.S. ET | Aug 1 » READ

A jump in sales to commercial customers and stout demand for the redesigned GMC Yukon, Chevrolet Tahoe and other trucks propelled General Motors' July sales up 9 percent from a year earlier. ... » READ

American Honda volume slides 4%

3:33 pm U.S. ET | Aug 1

Higher incentives lift Ford cars, trucks

1:55 pm U.S. ET | Aug 1

Lexus jumps 19% for first monthly luxury win in almost a year

4:12 pm U.S. ET | Aug 1

Chrysler Group posts best July since 2005 on 20% gain

11:56 am U.S. ET | Aug 1

Canada deliveries hit July record; Detroit 3 gain with trucks

2:16 pm U.S. ET | Aug 1

Sales climb 9 percent to 1.4M vehicles as SAAR hits 16.5M

5:45 am U.S. ET | Aug 1

WINNERS AND LOSERS

% change in sales among brands

	Winners	July		Winners	7 mos.		Losers	July		Losers	7 mos.
1	Maserati	324.0%	1	Maserati	328.0%	1	Jaguar	-26.4%	1	Mini	-21.8%
2	Smart	57.1%	2	Jeep	44.4%	2	Scion	-18.1%	2	Volkswagen division	-13.6%
3	Jeep	40.9%	3	Mitsubishi	28.9%	3	Acura	-17.6%	3	Scion	-13.3%
4	Subaru	27.0%	4	Ram	21.7%	4	Volvo	-17.2%	4	Volvo	-11.1%
5	GMC	22.2%	5	Subaru	17.9%	5	Volkswagen division	-14.6%	5	Chrysler Division	-10.5%

Top Selling Light Vehicles

		July			7 mos.
1	Ford F series	63,240	1	Ford F series	429,06
2	Chevrolet Silverado	42,097	2	Chevrolet Silverado	282,77
3	Toyota Camry	39,888	3	Toyota Camry	262,42
4	Ram	35,621	4	Ram	239,48

5	Honda Accord			Honda Accord	
6	Toyota Corolla/ Matrix	30,833	6	Toyota Corolla/ Matrix	205,18
7	Honda Civic	30,038	7	Nissan Altima	203,10
8	Honda CR-V	28,522	8	Honda Civic	197,13
9	Toyota RAV4	26,779	9	Ford Fusion	189,44
10	Nissan Altima	26,654	10	Honda CR-V	183,21

Top Selling Cars

		July			7 mos.
1	Toyota Camry	39,888	1	Toyota Camry	262,42
2	Honda Accord	35,073	2	Honda Accord	220,35
3	Toyota Corolla/ Matrix	30,833	3	Toyota Corolla/ Matrix	205,18
4	Honda Civic	30,038	4	Nissan Altima	203,10
5	Nissan Altima	26,654	5	Honda Civic	197,13
6	Ford Fusion	23,942	6	Ford Fusion	189,44
7	Hyundai Sonata	22,577	7	Chevrolet Cruze	166,26
8	Hyundai Elantra	22,213	8	Ford Focus	138,68
9	Chevrolet Cruze	20,926	9	Hyundai Elantra	134,71
10	Toyota Prius	20,675	10	Hyundai Sonata	128,92

Top Selling Light Trucks

		July			7 mos.
1	Ford F series	63,240	1	Ford F series	429,06
2	Chevrolet Silverado	42,097	2	Chevrolet Silverado	282,77
3	Ram	35,621	3	Ram	239,48
4	Honda CR-V	28,522	4	Honda CR-V	183,21
5	Toyota RAV4	26,779	5	Ford Escape	179,44
6	Ford Escape	26,558	6	Chevrolet Equinox	146,15
7	Chevrolet Equinox	25,321	7	Toyota RAV4	143,73
8	Ford Explorer	19,006	8	Ford Explorer	123,46
9	GMC	17,488	9	Nissan	115,92

				Sierra		Rogue
				10 Nissan Rogue	16,618	10 GMC Sierra 110,67

Table sorted by year-to-date sales

	July 2014	July 2013	% change	7 mos. 2014	7 mos. 2013	% change
Buick	17,683	16,393	8%	131,155	117,230	12%
Cadillac	15,241	15,652	-3%	97,358	99,331	-2%
Chevrolet	175,155	162,670	8%	1,203,063	1,177,804	2%
GMC	48,081	39,356	22%	280,452	260,052	8%
General Motors	**256,160**	**234,071**	**9%**	**1,712,028**	**1,654,417**	**4%**
Ford division	203,604	186,161	9%	1,424,439	1,437,609	-1%
Lincoln	7,863	6,919	14%	52,385	45,207	16%
Ford Motor Co.	**211,467**	**193,080**	**10%**	**1,476,824**	**1,482,816**	**0%**
Lexus	27,333	23,031	19%	166,022	141,446	17%
Scion	5,127	6,261	-18%	35,763	41,261	-13%
Toyota Division	183,342	164,102	12%	1,179,624	1,119,478	5%
Toyota/Scion	*188,469*	*170,363*	11%	*1,215,387*	*1,160,739*	5%
Toyota Motor Sales	**215,802**	**193,394**	**12%**	**1,381,409**	**1,302,185**	**6%**
Chrysler Division	23,455	19,978	17%	164,523	183,817	-11%
Dodge	43,118	41,986	3%	350,042	360,400	-3%
Ram	37,699	32,078	18%	252,056	207,140	22%
Dodge/Ram	*80,817*	*74,064*	*9%*	*602,098*	*567,540*	*6%*
Fiat	3,807	3,783	1%	28,779	25,395	13%
Jeep	59,588	42,277	41%	392,390	271,682	44%
Chrysler Group	**167,667**	**140,102**	**20%**	**1,187,790**	**1,048,434**	**13%**
Acura	12,480	15,150	-18%	90,431	92,131	-2%
Honda Division	123,428	126,289	-2%	784,913	794,886	-1%
American Honda Motor Co.	**135,908**	**141,439**	**-4%**	**875,344**	**887,017**	**-1%**
Infiniti	8,538	7,762	10%	67,879	59,995	13%
Nissan Division	112,914	101,279	12%	758,050	673,755	13%
Nissan North America	**121,452**	**109,041**	**11%**	**825,929**	**733,750**	**13%**
Hyundai division	67,011	66,005	2%	431,445	427,015	1%
Kia	52,309	49,004	7%	349,722	326,355	7%
Hyundai-Kia	**119,320**	**115,009**	**4%**	**781,167**	**753,370**	**4%**
Audi	14,616	13,064	12%	98,965	87,341	13%
Bentley	201	193	4%	1,509	1,367	10%
Lamborghini*	59	58	2%	413	400	3%
Porsche	4,300	3,820	13%	27,219	25,129	8%
VW division	30,553	35,779	-15%	209,697	242,571	-14%
VW Group Of America	**49,729**	**52,914**	**-6%**	**337,803**	**356,808**	**-5%**
Subaru	**45,714**	**35,994**	**27%**	**283,722**	**240,591**	**18%**
BMW division	26,409	24,043	10%	183,791	164,474	12%
Mini	5,811	5,950	-2%	29,963	38,306	-22%
Rolls-Royce*	75	71	6%	525	497	6%
BMW Group	**32,295**	**30,064**	**7%**	**214,279**	**203,277**	**5%**
Maybach	-	-	-	-	6	-100%
Mercedes-Benz	29,406	25,565	15%	192,513	177,006	9%
Smart USA	1,351	860	57%	5,998	5,319	13%
Daimler AG	**30,757**	**26,425**	**16%**	**198,511**	**182,331**	**9%**
Mazda	**29,238**	**24,977**	**17%**	**185,669**	**169,920**	**9%**
Mitsubishi	**6,349**	**5,230**	**21%**	**46,021**	**35,699**	**29%**

Jaguar						
Land Rover	4,643	4,050	15%	30,829	27,034	14%
Jaguar Land Rover N.A.	5,830	5,663	3%	40,333	36,445	11%
Volvo Cars N.A.	4,894	5,909	-17%	34,224	38,487	-11%
Tesla*	1,800	1,403	28%	15,030	13,275	13%
Maserati	1,132	267	324%	6,574	1,536	328%
Suzuki	-	-	-	-	5,946	-100%
Other**	291	284	3%	2,037	1,988	3%
U.S. LIGHT VEHICLE	1,435,805	1,315,266	9%	9,604,694	9,148,292	5%

*Estimate
**Includes estimates for Aston Martin, Ferrari and Lotus
***Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.

Highlights

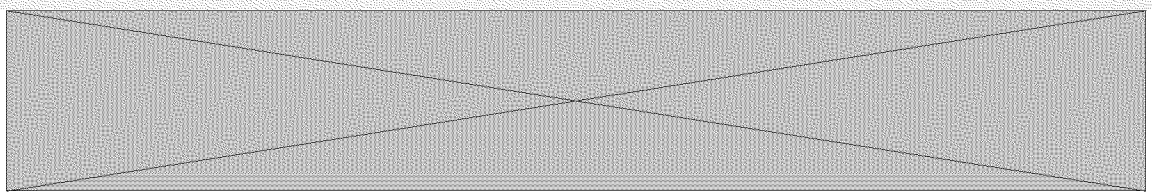
Mfgr. highest volume - July	GM	256,160	Mfgr. highest volume - 7 mos.	GM	1,712,028
Mfgr. gained the most volume - July	Chrysler Group	27,565	Mfgr. gained the most volume - 7 mos.	Chrysler Group	139,356
Mfgr. lost the most volume - July	American Honda	(5,531)	Mfgr. lost the most volume - 7 mos.	VW Group of America	(19,005)
Mfgr. highest % increase - July	Maserati	324%	Mfgr. highest % increase - 7 mos.	Maserati	328%
Mfgr. biggest % drop - July	Volvo	-17%	Mfgr. biggest % drop - 7 mos.	Volvo	-11%
Brand highest volume - July	Ford	203,604	Brand highest volume - 7 mos.	Ford	1,424,43
Brand gained the most volume - July	Toyota	19,240	Brand gained the most volume - 7 mos.	Jeep	120,708
Brand lost the most volume - July	VW	(5,226)	Brand lost the most volume - 7 mos.	VW	(32,874)
Brand highest % increase - July	Maserati	324%	Brand highest % increase - 7 mos.	Maserati	328%
Brand biggest % drop - July	Jaguar	-26%	Brand biggest % drop - 7 mos.	Mini	-22%

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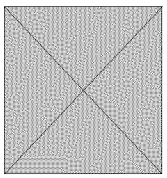
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Sat 8/2/2014 4:01:51 PM
Subject: Green Car Report Daily Headlines

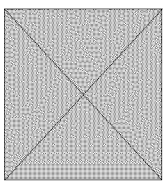
Email not displaying correctly? View it in your browser.



The latest from your friends at GCR:

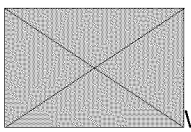
More ways to follow us:





Volt & Leaf Crashed, Tesla Gigafactory, Three Drive Reports: The Week In Reverse (VIDEO)

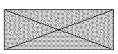
Aug 02, 2014 01:57 pm | feedback@highgearmedia.com (John Voelcker)



Why were reporters sneaking around a Nevada industrial park? And which plug-in electric car didn't do so well on a recent IIHS crash test? This is the Week In Reverse for Friday, August 1, 2014, right here at Green Car Reports. We've now driven the upcoming 2015 Audi A3 e-tron plug-in hybrid, and we tell you all about it. July sales figures for...

comments | read more





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Our mailing address is:
High Gear Media
830 Menlo Ave, Suite 201
Menlo Park, CA 94025

Add us to your address book

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Update your profile

.

To: Giles, Michael (EEO)[michael.giles@vw.com]
From: Snyder, Jim
Sent: Mon 8/4/2014 1:17:48 PM
Subject: Golf Diesel test

Mike, I have caught up on all the emails regarding the Golf and I've talked to Vince. The lab has agreed to prep the car today using the standard shift schedule with the expectation that we will have this sorted out and can test with the correct schedule on Tuesday.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Ex. 7 @volkswagen.de]; Ex. 7 Ex. 7 @vw.com]; Ex. 7 @vw.com]; Ex. 7 Ex. 7 @vw.com]; Ex. 7
From: Ex. 7
Sent: Mon 8/4/2014 1:24:41 PM
Subject: RE: Ex. 4 - CBI

Thanks Jim, this is good news.

I will forward to Hannah. Also, Hannah and someone from our office will plan to be there tomorrow for the test.

Thanks

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, August 04, 2014 9:18 AM
To: Ex. 7
Subject: Ex. 4 - CBI

Ex. 4 - CBI

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7
Ex. 7 @vw.com]
From: Harris, Dale (EEO)
Sent: Mon 8/4/2014 3:05:30 PM
Subject: RE: 2013 VW Group CAFE/GHG Report
CBI_DVWXV_COMMON_CR1A_CAR_R02.pdf

Dave

Attached is the MY 2013 Final GHG Report that was submitted to Verify in April 2014. Please let me know if there are any questions. Thanks!!!

Regards,

Ex. 7

VOLKSWAGEN Group of America, Inc.

Engineering and Environmental Office (EEO)
3800 Hamlin

AuburnHills Michigan 48326

United States of America

P: **Ex. 7**

E: **Ex. 7**

From: Ex. 7
Sent: Monday, August 04, 2014 8:36 AM
To: Ex. 7

Subject: FW: 2013 VW Group CAFE/GHG Report
Importance: High

Hi guys:

Is Dave looking for the information that was sent to Gina McCarthy cc: Rob French in mid-May? Please check. Was the requested information uploaded to VERIFY?

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

E-Mail: Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, August 01, 2014 5:52 PM
To: Ex. 7

Cc: Ex. 7 Snyder, Jim
Subject: 2013 VW Group CAFE/GHG Report

Ex. 7

I looked in Verify for your 2013 CAFE GHG reports and found two letters dated 3/17/2014--- one for cars and one for trucks. The letters have some calculation information (but don't use the EPA templates like the 2012 VW CAFE/GHG report did) and don't mention anything about AC credits, provide the SAE J2727 A/C leakage worksheets, off cycle credits, CH4 & N2O debits, etc.

The letters are also missing the summary pages of GHG fleet average credits/debits, A/C credits, total credits for the 2013 model year. Most manufacturers also include an AB&T page (like the EPA GHG template) which tallies up the credits/debits for the 2009-2013 model years.

Both of the 3/17/2017 letters indicate that "Volkswagen intends to provide additional information required by 86.1865-12 by May 1, 2014."

Please email me a copy of the "additional information" letters for cars and trucks and enter a pdf copy of them in Verify's document module when you get a chance.

Thanks

To: Harris, Dale (EEO)[Dale.Harris@vw.com]
From: Good, David
Sent: Mon 8/4/2014 4:55:28 PM
Subject: RE: 2013 VW Group CAFE/GHG Report [Thanks; no need to open]

From: Harris, Dale (EEO) [mailto:Dale.Harris@vw.com]
Sent: Monday, August 04, 2014 11:06 AM
To: Good, David
Cc: Kata, Leonard (EEO); Thomas, Richard (EEO)
Subject: RE: 2013 VW Group CAFE/GHG Report

Dave

Attached is the MY 2013 Final GHG Report that was submitted to Verify in April 2014. Please let me know if there are any questions. Thanks!!!

Regards,

Dale Harris

Certification Specialist

VOLKSWAGEN Group of America, Inc.

Engineering and Environmental Office (EEO)
3800 Hamlin

AuburnHills Michigan 48326

United States of America

P: +1 248 754-4218

E: Dale.Harris@vw.com

From: Kata, Leonard (EEO)
Sent: Monday, August 04, 2014 8:36 AM
To: Harris, Dale (EEO); Thomas, Richard (EEO)
Subject: FW: 2013 VW Group CAFE/GHG Report
Importance: High

Hi guys:

Is Dave looking for the information that was sent to Gina McCarthy cc: Rob French in mid-May? Please check. Was the requested information uploaded to VERIFY?

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

E-Mail: leonard.kata@vw.com

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, August 01, 2014 5:52 PM
To: Kata, Leonard (EEO)
Cc: Schmidt, Oliver (EEO); Snyder, Jim
Subject: 2013 VW Group CAFE/GHG Report

Len,

I looked in Verify for your 2013 CAFE GHG reports and found two letters dated 3/17/2014--- one for cars and one for trucks. The letters have some calculation information (but don't use the EPA templates like the 2012 VW CAFE/GHG report did) and don't mention anything about AC credits, provide the SAE J2727 A/C leakage worksheets, off cycle credits, CH4 & N2O debits, etc.

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Both of the 3/17/2017 letters indicate that "Volkswagen intends to provide additional information required by 86.1865-12 by May 1, 2014."

Please email me a copy of the "additional information" letters for cars and trucks and enter a pdf copy of them in Verify's document module when you get a chance.

Thanks

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Mon 8/4/2014 4:58:05 PM
Subject: RE: Corrected Index 64 and 65

Richard,

I already sent the file to DOE for posting on the web. I'll make sure these are in the next dataset I send to DOE---on 8/9/2014 or so.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Monday, August 04, 2014 11:17 AM
To: Good, David
Subject: Corrected Index 64 and 65

Hi Dave;

I found a typo error of the 5-cycle city unrounded value (i.e.: 24.3584 MPG should be 21.3584) so I corrected both those Audi labels in Verify. Has your file already gone to the contractor, can you correct those and send again?

Thanks,

RET

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 8/4/2014 4:59:50 PM
Subject: RE: Corrected Index 64 and 65

Okay thanks.

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, August 04, 2014 12:58 PM
To: Thomas, Richard (EEO)
Subject: RE: Corrected Index 64 and 65

Richard,

I already sent the file to DOE for posting on the web. I'll make sure these are in the next dataset I send to DOE---on 8/9/2014 or so.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Monday, August 04, 2014 11:17 AM
To: Good, David
Subject: Corrected Index 64 and 65

Hi Dave;

I found a typo error of the 5-cycle city unrounded value (i.e.: 24.3584 MPG should be 21.3584) so I corrected both those Audi labels in Verify. Has your file already gone to the contractor, can you correct those and send again?

Thanks,

RET

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Joerg Launer (Jorg.Launer@vw.com)[Jorg.Launer@vw.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]; Thorsten Wesse (Thorsten.Wesse@afcc-auto.com)[Thorsten.Wesse@afcc-auto.com]; Bill Elrick[belrick@CAFCP.org]; Nico Bouwkamp[nbouwkamp@cafcp.org]; John Juriga (jjuriga@hatci.com)[jjuriga@hatci.com]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Ex. 7 Ex. 7
Cc: Kaori Alarid (kaori.alarid@tema.toyota.com)[kaori.alarid@tema.toyota.com]; Ex. 7 Ex. 7 Melanie Hobenshield (melanie.hobenshield@afcc-auto.com)[melanie.hobenshield@afcc-auto.com]; Pat Krayser[pkrayser@aqmd.gov]; Ex. 7 ob Cassidy (robert.cassidy@nissan-usa.com)[robert.cassidy@nissan-usa.com]; Brandi Gonzales[bgonzales@CAFCP.org]; Grundler, Christopher[grundler.christopher@epa.gov]; Dean Kato (dean@intereco.com)[dean@intereco.com]; dsarkar@aqmd.gov[dsarkar@aqmd.gov]; Frank Seyfried (frank.seyfried@volkswagen.de)[frank.seyfried@volkswagen.de]; Ex. 7 Ex. 7 Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Juergen Friedrich (juergen.friedrich@daimler.com)[juergen.friedrich@daimler.com]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kiho Yoo (k.u@hyundai-motor.com)[k.u@hyundai-motor.com]; Linda Carrizosa[lcarrizosa@cafcp.org]; Lisa Mirisola (lmirisola@aqmd.gov)[lmirisola@aqmd.gov]; Mark S. Torigian Esq (Mtorigian@hatci.com)[Mtorigian@hatci.com]; Matt McClory (matt.mcclory@tema.toyota.com)[matt.mcclory@tema.toyota.com]; Matthew Forrest (matthew.forrest@daimler.com)[matthew.forrest@daimler.com]; Randy Roesser (Randy.Roesser@energy.ca.gov)[Randy.Roesser@energy.ca.gov]; Wysor, Tad[wysor.tad@epa.gov]; Takehito Yokoo (takehito.yokoo@tema.toyota.com)[takehito.yokoo@tema.toyota.com]; Tiger Jeong (tigerjeong@hyundai.com)[tigerjeong@hyundai.com]; Tim Olson (tolson@energy.state.ca.us)[tolson@energy.state.ca.us]; William Craven (william.b.craven@daimler.com)[william.b.craven@daimler.com]; Amy Lilly (alilly@hatci.com)[alilly@hatci.com]; Ex. 7 Ex. 7 catherine.kim@daimler.com[catherine.kim@daimler.com]; Nancy Ann Leffler (NAL@CHRYSLER.COM)[NAL@CHRYSLER.COM]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Chris White[cwhite@CAFCP.org]; Ben Xiong[bxiong@cafcp.org]
From: Linda Carrizosa
Sent: Mon 8/4/2014 5:11:34 PM
Subject: Meeting Materials now availalbe on MR for Aug 6 ST Phone Meeting

Good Afternoon Steering Team Members,

The agenda and meeting materials for the Aug 6 ST Phone Meeting are now available on MR and are located here: http://cafcpmembers.org/membersonly/node/3896

Here is the dial-in information and agenda for your convenience:

Dial In Information:

Aug 6, 2014 – 10:30am – 12:00pm, PDT

Dial-in: Ex. 7

Gotomeeting: https://global.gotomeeting.com/join/927637653, Meeting ID: Ex. 7

AGENDA

1. Welcome and agenda review (Robert Bienenfeld) – 10 minutes

2. CaFCP project status reports – 25 min

a. Q2 communications report and communications program presentation (Chris)

b. 1a: Maintaining organization overview (Brandi)

3. Update on DMS station field testing project (Mike Kashuba) – 5 min

4. Update on MSA changes (Bill) – 5 mins

5. Planning for August 13th ST meeting (Bill) – 25 minute

6. Administrative items (Bill) – 15 minutes

a. Approve July 7th Decisions and Assignments

b. Current budget performance (6+6)

c. Additional in-kind contributions

d. Membership

i. Status of ITM and BAE

ii. DOT and EPA

iii. Governor's office

iv. BAAQMD

7. Wrap up (Robert) – 5 min

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 8/4/2014 5:54:15 PM
Subject: Automatic reply: Scheduled VW Testing

I will be out of the office Oct 17 through Oct 24th, returning Oct 25th. If the matter is urgent, please contact Bob Hart x.44224 for Certification issues, or Richard Thomas regarding Fuel Economy issues.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Schlueter, Hannah (EASZ/1)
Sent: Mon 8/4/2014 6:09:08 PM
Subject: Automatische Antwort: Scheduled VW Testing

Ich bin bis einschliesslich 07.08.2014 außer Haus.

I will be out of the office through 08-07-2014.

Meine Emails werde ich nur sporadisch lesen können.

I will not be able to read my emails regularly.

To: Snyder, Jim[Snyder.Jim@epa.gov]; Rodgers, William (EEO)[William.Rodgers@vw.com]; Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
Cc: Schlueter, Hannah (EASZ/1)[hannah.schlueter@volkswagen.de]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 8/4/2014 8:24:41 PM
Subject: RE: Scheduled VW Ex. 4 - CBI Test on Tuesday possible

Thanks for the information Jim. Hannah and Bill will be there in the morning for the testing.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, August 04, 2014 4:12 PM
To: Snyder, Jim; Rodgers, William (EEO); Mazaitis, Vincent; Wehrly, Linc
Cc: Schlueter, Hannah (EASZ/1); Giles, Michael (EEO); Allen, Gregory (EEO)
Subject: RE: Scheduled VW Ex. 4 - CBI Test on Tuesday possible

Okay, I just talked to the cell operator and they *are* prepping the car as I write this . So I guess we will have a chance to test it on Tuesday after all. Sorry for the confusion.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Snyder, Jim
Sent: Monday, August 04, 2014 1:54 PM
To: 'Rodgers, William (EEO)'; Mazaitis, Vincent; Wehrly, Linc
Cc: Schlueter, Hannah (EASZ/1); Giles, Michael (EEO); Allen, Gregory (EEO)
Subject: RE: Scheduled VW Testing

Ex. 4 - CBI

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, August 04, 2014 9:41 AM
To: Mazaitis, Vincent
Cc: Schlueter, Hannah (EASZ/1); Giles, Michael (EEO); Allen, Gregory (EEO); Snyder, Jim
Subject: Scheduled VW Testing

Hello Vince,

We plan to have myself and Hannah Schlueter at your facility at 7AM for the scheduled testing of **Ex. 4 - CBI** tomorrow Aug 5th.

I will be out of the office the remainder of today so please reply to all copied on this message if there is any change to the schedule.

Regards,

Bill Rodgers

VWGoA EEO

Office (248) 754-4219

Mobile (810) 287-4581

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Mon 8/4/2014 10:28:12 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of August 1, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-8-1-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of August 1, 2014

Attached are the data in Verify as of August 1, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on Aug 9, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl	
		2015 Volkswagen	Audi Group of	A3	VGA	7	1.8	4
Diesel;		2015 Volkswagen	Audi Group of	A3	VGA	101	2.0	4
		2015 Volkswagen	Audi Group of	A3 Cabriolet	VGA	6	1.8	4
		2015 Volkswagen	Audi Group of	A3 Cabriolet quattro	VGA	5	2.0	4
		2015 Volkswagen	Audi Group of	A3 quattro	VGA	4	2.0	4
		2015 Volkswagen	Audi Group of	A4	VGA	46	2.0	4
Error: Unrc	Y	2015 Volkswage	Audi	A4 quattro	VGA	64	2.0	4
		2015 Volkswagen	Audi Group of	A4 quattro	VGA	49	2.0	4
		2015 Volkswagen	Audi Group of	A5 Cabriolet quattro	VGA	66	2.0	4
Error: Unrc	Y	2015 Volkswage	Audi	A5 quattro	VGA	65	2.0	4
		2015 Volkswagen	Audi Group of	A5 quattro	VGA	50	2.0	4
		2015 Volkswagen	Audi Group of	A6	VGA	47	2.0	4
		2015 Volkswagen	Audi Group of	A6 quattro	VGA	48	2.0	4
		2015 Volkswagen	Audi Group of	A6 quattro	VGA	72	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	A6 quattro	VGA	17	3.0	6
		2015 Volkswagen	Audi Group of	A7 quattro	VGA	71	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	A7 quattro	VGA	18	3.0	6
		2015 Volkswagen	Audi Group of	A8	VGA	40	3.0	6
		2015 Volkswagen	Audi Group of	A8	VGA	11	4.0	8
Diesel;		2015 Volkswagen	Audi Group of	A8L	VGA	15	3.0	6
		2015 Volkswagen	Audi Group of	A8L	VGA	41	3.0	6
		2015 Volkswagen	Audi Group of	A8L	VGA	10	4.0	8
		2015 Volkswagen	Audi Group of	A8L	VGA	14	6.3	12
		2015 Volkswagen	Audi Group of	allroad quattro	VGA	68	2.0	4
		2015 Volkswagen	Audi Group of	Q3	VGA	62	2.0	4
		2015 Volkswagen	Audi Group of	Q3 quattro	VGA	37	2.0	4
		2015 Volkswagen	Audi Group of	Q5	VGA	67	2.0	4
		2015 Volkswagen	Audi Group of	Q5	VGA	70	3.0	6
Diesel;		2015 Volkswagen	Audi Group of	Q5	VGA	16	3.0	6
Hybrid;		2015 Volkswagen	Audi Group of	Q5 Hybrid	VGA	63	2.0	4
Diesel;		2015 Volkswagen	Audi Group of	Q7	VGA	12	3.0	6
		2015 Volkswagen	Audi Group of	Q7	VGA	51	3.0	6
		2015 Volkswagen	Audi Group of	R8	VGA	27	4.2	8
		2015 Volkswagen	Audi Group of	R8	VGA	29	4.2	8
		2015 Volkswagen	Audi Group of	R8	VGA	35	5.2	10
		2015 Volkswagen	Audi Group of	R8	VGA	33	5.2	10
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA	26	4.2	8
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA	28	4.2	8
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA	34	5.2	10
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA	32	5.2	10
		2015 Volkswagen	Audi Group of	RS5	VGA	30	4.2	8
		2015 Volkswagen	Audi Group of	RS5 Cabriolet	VGA	31	4.2	8
Relabeled. Please include in the test group comment field the reason and regulations for relabeling (if not already pro		2015 Volkswagen	Audi Group of	RS7	VGA	21	4.0	8
		2015 Volkswagen	Audi Group of	S3	VGA	42	2.0	4
		2015 Volkswagen	Audi Group of	S4	VGA	73	3.0	6
		2015 Volkswagen	Audi Group of	S4	VGA	76	3.0	6
		2015 Volkswagen	Audi Group of	S5	VGA	74	3.0	6
		2015 Volkswagen	Audi Group of	S5	VGA	77	3.0	6
		2015 Volkswagen	Audi Group of	S5 Cabriolet	VGA	75	3.0	6
		2015 Volkswagen	Audi Group of	S6	VGA	20	4.0	8
		2015 Volkswagen	Audi Group of	S7	VGA	19	4.0	8
		2015 Volkswagen	Audi Group of	S8	VGA	9	4.0	8

	2015	Volkswagen Group of	SQ5	VGA	69	3.0	6	
	2015	Volkswagen Group of	TT Coupe quattro	VGA	2	2.0	4	
	2015	Volkswagen Group of	TT Roadster quattro	VGA	3	2.0	4	
	2015	Volkswagen Group of	Continental GT	VGA	24	4.0	8	
	2015	Volkswagen Group of	Continental GT	VGA	43	6.0	12	
	2015	Volkswagen Group of	Continental GT Convertible	VGA	22	4.0	8	
	2015	Volkswagen Group of	Continental GT Convertible	VGA	45	6.0	12	
	2015	Volkswagen Group of	Flying Spur	VGA	23	4.0	8	
	2015	Volkswagen Group of	Flying Spur	VGA	44	6.0	12	
	2015	Volkswagen Group of	Mulsanne	VGA	61	6.8	8	
	2015	Volkswagen Group of	Veyron	VGA	60	8.0	16	
	2015	Volkswagen Group of	Aventador Coupe	VGA	52	6.5	12	
	2015	Volkswagen Group of	Aventador Roadster	VGA	53	6.5	12	
	2015	Volkswagen Group of	Huracan	VGA	25	5.2	10	
	2015	Volkswagen Lamborghini	Veneno Roadster	VGA	54	6.5	12	
	2015	Volkswagen Volkswagen	Beetle	VGA	79	1.8	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	78	1.8	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	81	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	95	2.0	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	83	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	91	2.0	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	80	1.8	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	82	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	96	2.0	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	84	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	92	2.0	4	
	2015	Volkswagen Volkswagen	CC	VGA	58	2.0	4	
	2015	Volkswagen Volkswagen	CC	VGA	59	2.0	4	
	2015	Volkswagen Volkswagen	CC 4Motion	VGA	56	3.6	6	
	2015	Volkswagen Volkswagen	Eos	VGA	36	2.0	4	
	2015	Volkswagen Volkswagen	Golf	VGA	103	1.8	4	
	2015	Volkswagen Volkswagen	Golf	VGA	85	1.8	4	
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	100	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	104	2.0	4	
	2015	Volkswagen Volkswagen	GTI	VGA	1	2.0	4	
	2015	Volkswagen Volkswagen	GTI	VGA	8	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	98	1.8	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	97	1.8	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	93	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	102	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	99	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	86	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	105	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	94	2.0	4	
	2015	Volkswagen Volkswagen	Passat	VGA	90	1.8	4	
	2015	Volkswagen Volkswagen	Passat	VGA	88	1.8	4	
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	89	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	87	2.0	4	
	2015	Volkswagen Volkswagen	Passat	VGA	55	3.6	6	
	2015	Volkswagen Volkswagen	Tiguan	VGA	39	2.0	4	
	2015	Volkswagen Volkswagen	Tiguan 4Motion	VGA	38	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Touareg	VGA	13	3.0	6	
	2015	Volkswagen Volkswagen	Touareg	VGA	57	3.6	6	

Hybrid; Error: Stop/Start fie2015 Volkswagen Clean Diesel Engineering Challenge;	106	3.0	6

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	31	43	36				41.0359	61.6186	48.2955
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.7000	39.2000	31.1732
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	15	25	18				17.8763	33.1799	22.5584
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995

Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S7)	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S6)	31	41	34	40.2000	57.8000	46.5830
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S6)	30	40	34	39.7000	56.5000	45.8327
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(S6)	25	36	29	32.5000	51.1000	38.8661
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	31	43	36	41.0359	61.6186	48.2955
Manual(M6)	31	45	36	40.4000	65.2000	48.7432
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(S6)	25	37	30	32.7401	52.6000	39.4414
Manual(M5)	25	37	29	32.3787	52.4790	39.1216
Auto(AM-S6)	24	32	27	29.5595	44.4600	34.8093
Auto(AM-S6)	31	45	36	41.3000	64.1000	49.1703
Auto(S6)	23	34	26	28.7000	47.5000	34.9193
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Manual(M6)	31	46	36	40.2000	65.6000	48.6823
Manual(M6)	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M5)	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S6)	30	42	34	38.7000	59.8000	46.0046
Manual(M6)	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

Auto(S8)	20	24	21		25.1000	33.1000	28.1631

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
31.1996	43.0359	35.6064		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
24.3584	30.0427	24.5522		TC	Turbocharg	SA	Semi-Auto	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
19.8843	28.2637	22.9455		TC	Turbocharged	SA	Semi-Automatic	8	
24.3584	30.0427	24.5522		TC	Turbocharg	SA	Semi-Auto	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8	
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8	
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8	
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8	
21.0646	27.9892	23.7037		TC	Turbocharged	SA	Semi-Automatic	8	
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6	
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6	
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8	
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic	8	
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8	
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8	
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8	
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
14.5210	25.1577	17.9329		TC	Turbocharged	SA	Semi-Automatic	8	
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8	

16.7285	23.6581	19.2682	SC	Supercharged	SAM	Semi-Automatic	8
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	SAM	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	SAM	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SAM	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SAM	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SAM	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SAM	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	SAM	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
9.7957	16.2453	11.9264	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
14.0224	20.0427	16.2140	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G NA	Naturally Aspirated	AMS	Automated	7
24.7637	32.6943	27.7980	TC	Turbocharged	SAM	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	MM	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.6516	40.5292	34.4273	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MM	Manual	6
30.5143	40.5292	34.3319	TC	Turbocharged	MM	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	SAM	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.3081	39.6674	33.9083	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MM	Manual	6
29.6183	40.1317	33.5766	TC	Turbocharged	MM	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	MM	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	SAM	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
25.2640	36.0643	29.1989	TC	Turbocharged	SAM	Semi-Automatic	6
25.3353	37.0021	29.5244	TC	Turbocharged	MM	Manual	5
31.1996	43.0359	35.6064	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.7888	45.3939	36.0012	TC	Turbocharged	MM	Manual	6
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	MM	Manual	6
25.4066	37.0689	29.5967	TC	Turbocharged	SAM	Semi-Automatic	6
25.1926	37.0021	29.4176	TC	Turbocharged	MM	Manual	5
23.5744	31.8670	26.7012	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
31.4045	44.6752	36.2501	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.5269	33.6412	26.4608	NA	Naturally Aspirated	SAM	Semi-Automatic	6
24.6629	33.9684	28.1307	NA	Naturally Aspirated	MM	Manual	5
30.6516	45.6549	35.9711	TC	Turbocharged	MM	Manual	6
22.8950	32.6159	26.4413	TC	Turbocharged	MM	Manual	6
24.3335	35.7288	28.4112	TC	Turbocharged	SAM	Semi-Automatic	6
24.1899	35.2585	28.1693	TC	Turbocharged	MM	Manual	5
29.6183	41.8508	34.1040	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
29.8256	43.5614	34.7575	TC	Turbocharged	MM	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	SAM	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SAM	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SAM	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	SAM	Semi-Automatic	8

19.8843	23.7762	21.4655	SC	Supercharged	GA	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Dri	FVGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Dri	FVGAV02t	0VAL	20		DU	Diesel, ultra low s
Y	N	F	2-Wheel Dri	FVGAV02t	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV02.	0APA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV02.	0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Dri	FVGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel I	FVGAJ02.(		85	422	GP	Gasoline (I
N	N	A	All Wheel D	FVGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ02.	0AUF	85	389	GP	Gasoline (Premium
Y	N	A	All Wheel I	FVGAJ02.(		85	422	GP	Gasoline (I
N	N	A	All Wheel D	FVGAV02.	0AUB	15		GP	Gasoline (Premium
N	N	F	2-Wheel Dri	FVGAV02t	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV02.	0AUB	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel D	FVGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel D	FVGAV03.	0AUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV06.	3VUM	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ02.	0AUF	85	406	GP	Gasoline (Premium
Y	N	F	2-Wheel Dri	FVGAV02t	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ02.	0AUF	85	455	GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0NU4		5	DU	Diesel, ultra low s
Y	N	A	All Wheel D	FVGAT02.	0AUH	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAT03.	0NU3		5	DU	Diesel, ultra low s
Y	N	A	All Wheel D	FVGAT03.	0ALT	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel D	FVGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel D	FVGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	2NLC	15		GP	Gasoline (Premium
N	N	A	All Wheel D	FVGAV04.	2NLC	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV05.	2NLD	15		GP	Gasoline (Premium
N	N	A	All Wheel D	FVGAV05.	2NLD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	2NLB	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV02.	0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
N	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
N	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAJ03.	0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel D	FVGAV04.	0NUA	15		GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAJ03.0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	10		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Y	N	A	All Wheel Drive	3VWGAT03.0VUH	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit I	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	miles per gallon		Not exempt			86	12		
MPG	miles per gallon		Not exempt			86	12		
MPG	miles per gallon		Not exempt	79	10				
MPG	miles per gallon		Not exempt	79	10				
MPG	miles per gallon		Not exempt			86	10		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exemp	84	12				
MPG	miles per gallon		Not exempt	84	12				
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			100	15		
MPG	miles per gallon		Not exempt			100	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			90	28		
MPG	miles per gallon		Not exempt					84	17
MPG	miles per gallon		Not exempt					84	17
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			86	10		
MPG	miles per gallon		Not exempt			90	13		
MPG	miles per gallon		Not exempt			90	13		
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			100	15		

MPG	miles per gallon	Truck							
MPG	miles per gallon	Not exempt	74	13					
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt			101	11			
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	77	11					
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							

MPG	miles per gallon	Truck

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
1550	1550	hwy label value correction							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	manuf con	15	22	18			19.5	
2200	2200								
2500	2500	eng code correction	14	20	16			17.4	
2300	2300	manuf con	15	22	18			19.5	
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350	5-yr fuel cost corrected							
2400	2400	manuf confirmatory tests update	15	21	17			19.2	
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16			17.4	
2700	2700	5yr fuel cost corrected							
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator, zero set for 5-yr fuel saved instead of zero for spending							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3150	3150	Relabel, 50/50 weighting of best and worse (D&S) testing							
2200	2200	5yr fuel savings set to zero instead of spending							
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							

3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
3550	3550	Release date change			
4400	4400	corrected carline to Veneno Roadster 477			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1800	1800				
1750	1750				
1550	1550	hwy label value corrected			
1550	1550				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1750	1750				
1800	1800	fuel consumption and CO2 unadj unrounded corrected			
2100	2100	5 yr fuel savings corrected			
1550	1550	release date change			
2000	2000				
1900	1900				
1550	1550				
2200	2200				
1900	1900	rounded adjusted highway CO2 rounding error corrected			
1900	1900				
1650	1650	EPA confirmatory tests numbers for city highway US06 now included, no label value changes			
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

2700 2700

Hwy2 Una	Comb2 Ur	City2 Unr	Hwy2 Unr	Cmb2 Unr	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E	MPG	miles per g
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E	MPG	miles per gallon
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E	MPG	miles per g
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E	MPG	miles per gallon
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E	MPG	miles per gallon

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Fuel2 Ann	City CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
					SIDI;	2	23		Subcompact Cars
						2	23		Subcompact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	24		Compact Cars
2600	400	281	347	2600	SIDI; Unde	2	24		Compact C
					SIDI;	2	24		Compact Cars
2900	448	308	385	2900	SIDI; FFV;	2	23		Subcompact Cars
2600	400	281	347	2600	SIDI; Unde	2	23		Subcompa
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars
						2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars
						2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars
						2	26		Large Cars
					SIDI;	2	26		Large Cars
					SIDI;	2	26		Large Cars
					SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27		Small Station Wag
					SIDI;	2	24		Compact Cars
					SIDI;	2	24		Compact Cars
2900	450	320	392	2900	SIDI; FFV;	2	231		Small SUV 4WD
					SIDI;	2	231		Small SUV 4WD
						2	231		Small SUV 4WD
					SIDI;	2	231		Small SUV 4WD
						2	233		Standard SUV 4W
					SIDI;	2	233		Standard SUV 4W
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	21		Two Seaters
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI; Under EPA regulations, the manufacturer is required to	2	25		Midsize Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	24		Compact Cars
					SIDI;	2	24		Compact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	23		Subcompact Cars
					SIDI;	2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars
					SIDI;	2	25		Midsize Cars

					SIDI;	2	231	Small SUV 4WD
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seaters
						2	21	Two Seaters
					SIDI & PFI;	2	21	Two Seaters
						2	21	Two Seate
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						1	14	Compact Cars
						1	14	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
						2	25	Midsize Cars
						2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

SIDI;	2	233	Standard SUV 4W

Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	2/25/2014		16011	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014		16483		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		16013		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		16012		N	N		
car	Vehicle Specific 5-cycle	1/15/2014		16197		N	N		
car	Derived 5-cycle label	6/9/2014		15670		N	N		
car	Derived 5-cycle label	7/29/2014		16732		N	Y	RL	Relabel - l
car	Vehicle Specific 5-cycle	6/19/2014		15675		N	N		
car	Derived 5-cycle label	6/9/2014		16313		N	N		
car	Derived 5-cycle label	7/29/2014		16733		N	Y	RL	Relabel - l
car	Vehicle Specific 5-cycle	6/19/2014		15676		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15673		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15674		N	N		
car	Derived 5-cycle label	6/9/2014		16062		N	N		
car	Vehicle Specific 5-cycle	6/10/2014		15458		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		16061		N	N		
car	Vehicle Specific 5-cycle	6/10/2014		15459		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15647		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15385		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15456		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15648		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15386		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		16699		N	N		
car	Derived 5-cycle label	6/9/2014		16637		N	N		
car	Derived 5-cycle label	8/4/2014		16057		N	N		
car	Vehicle Specific 5-cycle	8/4/2014		15650		N	N		
	Derived 5-cycle label	6/9/2014		16034		N	N		
	Vehicle Specific 5-cycle	6/19/2014		16700		N	N		
	Vehicle Specific 5-cycle	6/10/2014		15460		N	N		
	Vehicle Specific 5-cycle	6/19/2014		16701		N	N		
	Vehicle Specific 5-cycle	6/12/2014		15408		N	N		
	Derived 5-cycle label	6/9/2014		15711		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15493		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15497		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15601		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15598		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15492		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15496		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15600		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15597		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15589		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		15590		N	N		
car	Vehicle Specific 5-cycle	7/28/2014		16705		N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	8/4/2014		16702		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		16064		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		16067		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		16065		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		16068		N	N		
car	Vehicle Specific 5-cycle	6/19/2014		16066		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		15576		N	N		
car	Vehicle Specific 5-cycle	6/12/2014		15575		N	N		
car	Vehicle Specific 5-cycle	5/15/2014		15400		N	N		

	Vehicle Specific 5-cycle label	6/9/2014	16059	[redacted]	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16014	[redacted]	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15678	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15681	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	16523	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16085	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16169	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16388	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16339	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16086	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16389	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16340	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16492	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16198	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16482	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16533	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16429	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16468	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16703	[redacted]	N	N
car	Derived 5-cycle label	8/4/2014	16485	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16450	[redacted]	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16534	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16381	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16393	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16273	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16449	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16283	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N
	Vehicle Specific 5-cycle label	8/15/2014	15417	[redacted]	N	N
	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N

Derived 5-cycle label	9/15/2014	16757	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	Engine Code	N	CRUA = Audi A3, VW	N	Golf, Jetta Engine Co	N	de CVCA = VW Passat, Beetle, Beetle C	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	S VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC	
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC	
N	N		N		Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Co	N		Y	CONTINU	OY	AUDI VAL	
N	N		N		Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Co	N		Y	CONTINU	OY	AUDI VAL	
N	N		N		Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N		N		Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N		N		Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CTUA	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tec	hnology,	S VARIABLE	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8	D/	Activation of cylinder	1, 2, 3, 5,	and 8	Multitronic Exhaust adjustment
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tec	hnology,	S VARIABLE	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8	D/	Activation of cylinder	1, 2, 3, 5,	and 8	Multitronic Exhaust adjustment
N	N	Engine Code	Y	CTNA with 12 cylinder	D	Deactivation	intake and	Exhaust cam timing is electronically con	
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUOU	SLY VARIABLE VALVE TIMING		
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUOU	SLY VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CTUC	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hybrid	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y	CONTINUOU	S VARIABLE VALVE TIMING		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST		
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET	CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET	CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y	CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	S INTAKE AND EXHAUST CAM ADJUST		
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET	CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET	CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y	Continuously	intake and exhaust cam adjustment		
N	N	Engine Code	N	: CFS	Y	Continuously	intake and exhaust cam adjustment		
N	N	Engine Code	Y	CRDB (RS7)	D	Deactivation of cylinder	1, 2, 3, 5,	and 8	Multitronic Exhaust adjustment
N	N	Engine Code	N	CYFB - Audi S3	Y	CONTINUOU	SLY VARIABLE	Audi Valve System - Exhaust	
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	S VARIABLE	AUDI VALVETRONIC SYSTEM	
N	N	Engine Code	Y	CEUC. S6/S7	D	Activation of cylinder	1, 2, 3, 5,	and 8	Multitronic Exhaust adjustment
N	N	Engine Code	Y	CEUC. S6/S7	D	Activation of cylinder	1, 2, 3, 5,	and 8	Multitronic Exhaust adjustment
N	N	Engine Code	Y	CYCA. 6	D	Deactivation of cylinder	1, 2, 3, 5,	and 8	Multitronic Exhaust adjustment

N	N	Engine Code	N	: CTUA	Y	CONTINUOUS VARIABLE VALVE TIMING				
N	N	Generation	N	1 (EVO) 2.0L TFSI with	Y	Audi Valvelift System	CONTINUOUS VARIABLE VALVE TIMING			
N	N	Generation	N	1 (EVO) 2.0L TFSI with	Y	Audi Valvelift System	CONTINUOUS VARIABLE VALVE TIMING			
N	N	Engine Code	Y	CYCA. 6[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	N	CVAB. Bentley Continental GT / Continental GTC	Y		INLET AND OUTLET CONTINUOUSLY VARIABLE / M			
N	N	Engine Code	Y	CYCA. 6[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	N	CVAB. Bentley Continental GT / Continental GTC	Y		INLET AND OUTLET CONTINUOUSLY VARIABLE / M			
N	N	Engine Code	Y	CYCA. 6[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	N	CVAB. Bentley Continental GT / Continental GTC	Y		INLET AND OUTLET CONTINUOUSLY VARIABLE / M			
N	N		Y	Cylinder deactivation	Y	variable camshaft timing				
N	N	Engine Code	N	(CBXA). CHARGE AIR	Y	COOLER (INTERCOOLER)	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	Y	L539B (Aventador LP	Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	Y	L539B (Aventador LP	Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N	N	ENGINE CODE	CSJA (Lamborghini	Huracan / Huracan Spyder	Y		INLET AND OUTLET CONTINUOUSLY VARIABLE / M			
N	N	Engine Co	Y		ELECTRO	Y	HYDRAULN			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y		MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y		MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y		MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y		MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N		N		Y	position of intake/exhaust camshaft electronically				
N	N		N		Y	position of intake/exhaust camshaft electronically				
N	N		N		Y	position of intake/exhaust camshaft electronically				
N	N		N		Y	CONTINUOUS VARIABLE VALVE TIMING				
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOUS VARIABLE VALVE TIMING			
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOUS VARIABLE VALVE TIMING			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOUS VARIABLE VALVE TIMING				
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOUS VARIABLE VALVE TIMING				
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y		MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	CBPA	N		N			
N	N	Engine Code	N	CBPA	N		N			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y		MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y		MECHANICALLY ADJUSTED CAMSHAFTS			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta Engine Code	Y		CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine code	N	: CDVB	Y	Electronic control / Hydraulic adjustment				
N	N		N		Y	position of intake/exhaust camshaft electronically				
N	N		N		Y	position of intake/exhaust camshaft electronically				
N	N	Engine Code	N	CNRB	N		N			
N	N		N		Y	INTAKE / EXHAUST CAM TIMING ADJUSTED HYDRAU				

| | | |

Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
	1	Lithium Ion		266	5.00	37.0	On-Board		

1	NiMH	288	6.00	21.5	On-Board

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
Electrical Regen Brake	Both	Y						1	AC Induction

Other	BRAKE PEDAL TRIGGERED REGENERATIVE HYDRAULIC MECHANICAL BRAKE SYSTEM	Both	N	1	Other

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W40 VW 50501
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignit		N		5W40 VW
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignit		N		5W40 VW
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
	40			GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /

GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40
GDI	Spark Ignition Direct Injection	N	5W40
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
MFI	Multipoint/s	N	5W30 VW
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

3 PHASE CURRENT	PERM. MAGNET	GDI	Spark Ignition	Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S7)	Auto(AM-S7)	VENENO
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Jetta Base
N	No	Manual(M5)	Manual(M5)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

N	No	Auto(S8)	Auto(S8)	Touareg Hybrid

| EPA Calcul | MFR Calcu | EPA Calculated Gas G | [redacted] | [redacted] | [redacted]

24.9	[redacted]	4	4 FVGAJ03.0AUD	5
33.3		6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.5LLR	5
14.6		1	1 FVGAV06.5LLR	5
20.0		3	3 FVGAV05.2NLE	5
15.8		1	1 FVGAV06.	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
46.6		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
46.4		8	7 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
45.8		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
45.3		8	7 FVGAV02.0VAL	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
38.9		7	7 FVGAV02.0APA	9
39.3		7	7 FVGAV02.0APA	9
48.3		8	8 FVGAV02.0VAL	5
48.7		8	8 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
39.4		7	7 FVGAV02.0VPD	7
38.4		7	7 FVGAV02.0VPD	7
34.8		7	7 FVGAV02.0VPD	7
49.2		8	8 FVGAV02.0VAL	5
34.9		6	6 FVGAV02.0VUC	5
35.9		7	7 FVGAV02.0VUC	5
48.7		8	8 FVGAV02.0VAL	5
34.0		6	6 FVGAV02.0VPD	7
37.7		7	7 FVGAV02.0VPD	7
37.3		7	7 FVGAV02.0VPD	7
46.2		8	7 FVGAV02.0VAL	5
46.9		8	7 FVGAV02.0VAL	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

28.2	[redacted]	5	5 FVGAT03.0VUH	5

#2 Smog R	#2 Mfr Sm	#2 EPA Sm	SmartWay	#3 Smog R	#3 Mfr Sm	#3 EPA Sm	SmartWay	#4 Smog R	#4 Mfr Sm

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5

#4 EPA Sm	SmartWay	$ You Save	$ You Spen	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		500		379	267	328			
		3250		326	236	285			
		750		362	256	314			
		0		379	280	334			
		500		366	271	323			
		500		374	280	332			
			500	415	295	361			
		0		398	277	343			
			1500	446	314	386			
			500	415	295	361			
		0		398	277	343			
		750		360	272	320			
			1500	452	306	386			
			2000	482	326	412			
		1250		416	267	349			
			2500	493	321	416			
		1250		416	267	349			
			2000	473	303	397			
			2000	484	299	401			
		1000		426	280	360			
			2000	473	303	397			
			2000	492	310	410			
			5750	640	403	534			
			1000	420	317	373			
			1500	451	313	389			
			1500	446	316	387			
			1500	452	322	393			
			2500	496	347	429			
		500		430	328	385			
		0		369	298	337			
			1750	541	369	464			
			4750	570	409	498			
			5750	656	394	538			
			9250	772	439	622			
			6750	686	400	557			
			9250	753	454	618			
			5750	656	394	538			
			9250	772	439	622			
			6750	686	400	557			
			9250	753	454	618			
			4750	562	379	480			
			4750	558	398	486			
			4750	614	355	497			
		0		381	289	340			
			2500	488	321	413			
			3250	519	341	439			
			2500	488	321	413			
			3250	519	341	439			
			2500	500	341	428			
			3250	531	330	441			
			3250	531	330	441			
			3250	534	331	442			

	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	6750	629	441	544
	11000	831	523	692
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
3250		331	224	283
750		358	271	319
750		355	258	311
2250		347	238	298
2000		351	239	301
500		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
3250		332	223	283
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

2500	447	372	413

CO2-City L	CO2-Hwy I	CO2-Comb	CO2-City L	CO2-Hwy I	CO2-Comb	CO2-PHEV 240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5			
247.7	165.1	210.5	325.6	236.3	285.4			
289.0	188.0	243.6	362.1	255.5	314.1			
305.0	200.0	257.8	378.6	280.1	334.3			
294.0	198.0	250.8	366.0	271.0	323.2			
292.0	199.0	250.2	373.7	280.2	331.6			
327.0	210.0	274.4	415.0	295.0	361.0			
321.2	202.4	267.7	398.0	276.6	343.4			
353.0	224.0	295.0	445.7	313.9	386.4			
327.0	210.0	274.4	415.0	295.0	361.0			
321.2	202.4	267.7	398.0	276.6	343.4			
282.0	189.0	240.2	360.0	272.0	320.4			
358.0	219.0	295.4	452.0	306.0	386.3			
383.5	233.0	315.8	481.7	326.0	411.6			
331.0	194.0	269.4	415.7	267.3	348.9			
385.0	236.0	318.0	492.9	320.9	415.6			
331.0	194.0	269.4	415.7	267.3	348.9			
376.5	225.0	308.3	473.4	302.9	396.7			
391.0	224.0	315.9	483.9	299.0	400.7			
339.0	198.0	275.6	425.6	280.1	360.1			
376.5	225.0	308.3	473.4	302.9	396.7			
396.0	226.0	319.5	492.3	309.7	410.1			
515.0	310.0	422.8	640.3	403.3	533.6			
331.0	226.0	283.8	419.7	316.6	373.3			
357.5	223.0	297.0	451.0	312.5	388.7			
357.0	230.0	299.9	445.6	315.7	387.1			
358.0	230.0	300.4	451.6	321.9	393.2			
390.0	251.0	327.4	496.0	347.0	429.0			
348.0	231.0	295.4	430.5	328.5	384.6			
380.0	223.0	309.4	369.0	298.0	337.0			
446.0	260.0	362.3	541.0	369.0	463.6			
458.0	295.0	384.6	569.6	409.5	497.6			
540.6	299.8	432.3	656.3	394.3	538.4			
651.3	362.7	521.4	771.6	439.1	622.0			
577.0	309.4	456.6	685.6	400.2	557.2			
646.3	377.5	525.3	753.1	454.0	618.5			
540.6	299.8	432.3	656.3	394.3	538.4			
651.3	362.7	521.4	771.6	439.1	622.0			
577.0	309.4	456.6	685.6	400.2	557.2			
646.3	377.5	525.3	753.1	454.0	618.5			
466.0	296.0	389.5	562.0	379.0	479.6			
463.0	307.0	392.8	558.0	398.0	486.0			
499.5	269.5	396.0	613.8	354.8	497.3			
311.0	214.0	267.4	381.4	289.2	339.9			
396.0	248.0	329.4	488.0	321.0	412.8			
443.0	266.0	363.4	519.0	341.0	438.9			
396.0	248.0	329.4	488.0	321.0	412.8			
443.0	266.0	363.4	519.0	341.0	438.9			
401.0	256.0	335.8	500.0	341.0	428.4			
427.7	252.5	348.9	530.7	330.5	440.6			
427.7	252.5	348.9	530.7	330.5	440.6			
444.0	243.0	353.6	534.0	330.6	442.5			

427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
708.0	392.0	565.8	831.0	523.0	692.4
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
252.0	156.0	208.8	330.7	224.1	282.7
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3
272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
253.0	155.0	208.9	331.8	222.7	282.7
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

354.0	267.0	314.8	446.9	371.8	413.1

City PHEV	Hwy PHEV	Comb PHE	MDPV?	or Adj Comb	Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
			N	3.7		3.7			
			N	2.8		2.8			
			N	3.6		3.6			
			N	3.8		3.8			
			N	3.7		3.7			
			N	3.7		3.7			
			N	4.0		4.0			
			N	3.8		3.8			
			N	4.3		4.3			
			N	4.0		4.0			
			N	3.8		3.8			
			N	3.6		3.6			
			N	4.3		4.3			
			N	4.5		4.5			
			N	3.4		3.4			
			N	4.8		4.8			
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N	5.3	5.3

N	4.8	4.8

EPA_INCR	MFR_EPA	EPA_CALC	EPA_CALC	EPA_RND	EPA_RND	EPA_RND	EPA_RND	EPA_UNRI	EPA_UNRI

EPA_UNR	EPA_UNR	EPA_UNR	EPA_UNR	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
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						Mr Richard E Thomas Jr	
						Mr Richard	6
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						Mr Richard E Thomas Jr

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

Mr Richard E Thomas Jr

To: Ex. 7 @vw.com]
Cc: Ex. 7 @vw.com]
From: Good, David
Sent: Mon 8/4/2014 10:38:15 PM
Subject: RE: 2015 Audi RS7 Relabeled

Ex. 7

As we discussed last week, I agree with your plan not to provide notification (or send the customer a revised FE Label) to the 17 Audi RS7 customers for which vehicles were already delivered.

Sometimes (depending on the circumstances), our management will insist that manufacturers send a corrected FE Label to the customer. However, for these vehicles this approach is not needed.

Dave

From: Ex. 7 @vw.com]
Sent: Wednesday, July 30, 2014 9:22 AM
To: Good, David
Cc: Ex. 7
Subject: 2015 Audi RS7 Relabeled

Hi Dave;

Thanks for the discussion this morning. Because we were unable to determine a predominate mode of use for the driver selectable transmission modes, we have relabeled the 2015 Audi RS7 equipped with the 560 HP twin turbo 4.0L V8 engine. These relabeled lower label fuel economy values are derived from test results in the "S" transmission mode and then averaged together with the "D" mode at the required 50/50 weighting. The new lower label values are in production now and dealers holding 2015 Audi RS7 models will get replacement labels. This model has no gas guzzler tax required after this relabeling.

There were 17 units already sold and we do not plan to make any notification to these retail customers announcing any new values and see no regulatory obligation to do so, although we understand that any notification to owners would be optional. Please respond to this mail with your concurrence regarding notification to these 2015 Audi RS7 owners.

Best regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone

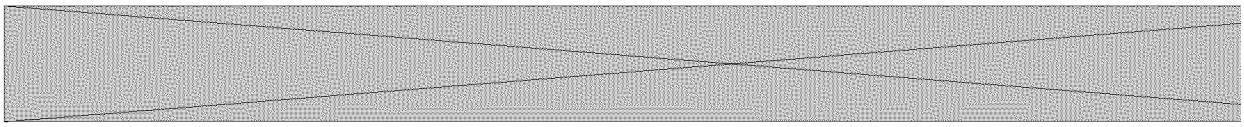
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mailto

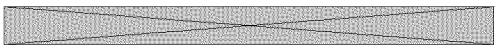
Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 8/5/2014 2:04:08 AM
Subject: CONFERENCE DAY 1: Lightweight vehicles pay manufacturing dividends to automakers | Why auto workers will be wearing their jobs | VW touts new architecture on Golf hatchback

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August 4, 2014

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Complete online coverage of the CAR Management Briefing Seminars from

Traverse City, Mich.

Lightweight vehicles pay manufacturing dividends to automakers

Lightweight vehicle materials are delivering significant side benefits to automakers striving to improve fuel economy. ... story

Why auto workers will be wearing their jobs

New factory technology is in the pipeline that will turn workers' clothing into data-emitting devices for plant management. ... story

VW touts new MQB architecture on Golf hatchback

Volkswagen, hoping to boost sales of the new Golf hatchback in the United States, today touted the vehicle's MQB architecture. ... story

TC BUZZ

RICHARD TRUETT

JLR still tops when it comes to aluminum

TRAVERSE CITY, Mich. -- With total global sales of 425,000 vehicles last year, Britain's Jaguar Land Rover is well behind German rivals BMW, Mercedes-Benz and Audi.

Published: Aug 4 1:25 pm U.S. Eastern time

DAVID SEDGWICK

How researcher quantifies the value of good supplier relations

TRAVERSE CITY, Mich. -- What is it worth for an automaker to have good relations with its suppliers? For Honda and Toyota, quite a lot, according to

Published: Aug 4 10:30 am U.S. Eastern time

LARRY P. VELLEQUETTE

Why the supplier price-fixing investigation looms large

TRAVERSE CITY, Mich. -- There's three dozen people in the auto supply chain who should be on the mind of everyone attending the Management Briefing Seminars here this year.

Published: Aug 4 9:40 am U.S. Eastern time

U.S. launches safety inspections of Southern auto suppliers

Alarmed by what it calls higher than normal incidents of injures and safety lapses, the Occupational Safety and Health Administration has launched an inspection of auto parts plants across Alabama,... ... story

American Axle plans tech center in Detroit

American Axle & Manufacturing plans to build a technical center at its Detroit headquarters to develop prototype components and to test manufacturing lines, CEO David Dauch said today. ... story

Imagining the impossible -- a Bimmer pickup?

Would any self-respecting BMW enthusiast be caught dead hauling cargo around town in an open-bed 3-Series? ... ☒ story

Safety regulators working on cars that can detect drunk drivers

Federal safety regulators are working on a "seamless" technology that can detect alcohol by touch and breath and can be used to reduce or eliminate alcohol-related vehicle crashes. ... ☒ story

Novelis expects to double auto aluminum production in 4 years

Novelis, the world's largest sheet aluminum producer, expects to double its North American production of automotive aluminum by 2018 or so from 2014 levels. ... ☒ story

GM tries new tools to lure young talent

General Motors needs new workers, but young people have the impression that factory work is dull, dingy and monotonous. ... ☒ story

Standardized robotic stations can improve quality as lightweight materials gain favor, exec says

Automakers' rapid embrace of lightweight materials will dramatically increases manufacturing complexity that can be solved with automation and standardization, says Martin Kinsella, director of... ... ☒ story

Hemi Hellcat engine aims to make potential buyers 'giddy'

Dodge made history when it announced last month that the Challenger SRT's supercharged 6.2-liter Hemi V-8 engine cranks out 707 hp. ... ☒ story

Chrysler exec: Recalls strengthen industry ties

This year's long list of automotive recalls is strengthening the bond between suppliers and automakers, Chrysler Group's head of quality says. ... ☒ story

Steel shows its mettle in push for pistons

Material promises more stability, higher mpg than aluminum

Now that the first steel pistons for passenger cars are coming off the production line at German auto suppliers KSPG AG and Mahle GmbH, how quickly can steel pistons totally replace aluminum? ... ☒ story

Licensing to rivals can boost profit for suppliers

Tesla Motors CEO Elon Musk's plan to grant access to

his company's intellectual property to advance electric vehicle technology bucks a trend. After all, licensing fees can yield hefty income. ... ☒ story

Bulls, bears greet suppliers' public offerings

Was Stabilus GmbH an exception, or did the auto supplier's public offering signal a new trend? The manufacturer of gas springs and hydraulic dampers struck a chord with investors when it went public.. ... ☒ story

Bosch to sell laser-based radar by '20

German supplier Robert Bosch GmbH will sell a laser-based radar known as lidar by 2020 to meet demand for high-tech sensors in autos, an executive said. ... ☒ story

Bosch looks to Japanese customers for growth

Demand is strong for high volumes from megasuppliers

German supplier Robert Bosch GmbH aims to double sales in the Asia-Pacific region by 2020, as the company taps expanding international business with Japanese automakers. ... ☒ story

Mopar, 3M team up for Jeep map decals

Graphics are designed for Wrangler, Cherokee and Grand Cherokee

It usually takes years to develop an automotive product and get it to market. ... ☒ story

Grammer expands into Brazil

Supplier to make head supports for local car market

Thanks to some newly won contracts, German auto supplier Grammer AG has made its debut in the Brazilian passenger car market. ... ☒ story

Aisin goal: Lift sales to Detroit 3

Supplier expands N.A. tech center

Japanese supplier Aisin Seiki Co. moved into a larger North American headquarters and technical in Detroit in July, part of an effort to sell more products to the Detroit 3. ... ☒ story

Jaguar exec touts XE's fuel efficiency

The upcoming Jaguar XE small sedan is poised to become the most fuel efficient car Jaguar has ever built, based on fuel economy estimates for the European diesel model. ... ☒ story

At the half: N.America car and truck production by plant

Each issue of the *Traverse City Daily* features production highlights for the first half of 2014. ... ☒ story

Suppliers to the 2015 Chrysler 200

Suppliers to the 2015 Chrysler 200 includes Haartz, MCI Mirror Controls, Guardian Automotive, Magna, TRW Automotive, Plastomer, ThyssenKrupp, ZF Lenksysteme, Eaton, Miniature Precision Components,... ... **story**

Suppliers to the 2015 Ford F series

Suppliers to the 2015 Ford F series includes Avery Dennison, Auma-Bocar Group, Methode Electronics, Leggett & Platt, TE Connectivity, Hope Global, SRG Global, Cequent Performance Products, Hitachi... ... **story**

Auto suppliers have until Aug. 29, 2014 to apply for the 2015 Automotive News PACE Awards. The awards, which are co-sponsored by EY and the Transportation Research Center Inc., recognize suppliers for innovations in four categories: Product, Manufacturing Process and Capital Equipment, Information Technology and Open.

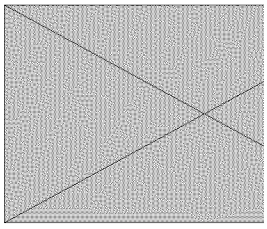
Winners will be announced at a gala awards ceremony on April 20, 2015, in Detroit. The Automotive News PACE Awards program is open to all automotive suppliers. The application fee is $1,500. To apply, visit www.autonews.com/pace. Questions? Call 313-446-6039.

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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Tue 8/5/2014 8:00:23 AM
Subject: Special MBS Coverage: Welcome to the Machine

View Web Version | Add to Safe Sender List

WardsAuto OEM Edition

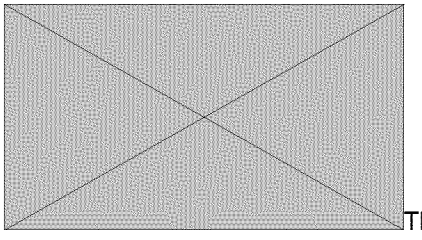


August 5, 2014

WardsAuto OEM Special Edition: 2014 CAR Management Briefing Seminars

Complete coverage of this week's MBS conference in Traverse City, MI.

GM Testing Google Glass; Ready to Meet Higher Volumes



The automaker has two pairs of the high-tech glasses at its Orion Twp., MI, plant, saying they can be useful for a variety of hands-free assembly tasks.

FULL ARTICLE

Incorrect Dirty-Factory Perceptions Linger

People who haven't visited an auto plant lately don't know what they are missing, says Jay Baron, head of the Center for Automotive Research.

FULL ARTICLE

VW's New 1.8L Turbo Delivers Efficiency On Road to MBS

We arrived in Traverse City with the trip computer reporting we averaged 35.2 mpg (6.7 L/100 km), just 0.8 mpg short of the official EPA number, even though the last leg of the trip has some significant hills.

Digital Magazine

- Read the Current Issue

WHITEPAPER

Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

Download "Time To Market: The Need for Speed in the Automotive Industry" Whitepaper

FULL ARTICLE

Plex Says Welcome to The Machine

Robots on the shop floor already talk to each other. That idea will grow so machines around the world in different companies working together will talk to each other, working out the most efficient way to produce goods, a Plex executive says.

FULL ARTICLE

Englishman Drums Up Auto Business in Michigan

Nigel Francis' role is to promote, retain and grow the auto industry in Michigan.

FULL ARTICLE

Special Report: 2014 CAR Management Briefing Seminars

 Complete coverage of the 2014 CAR Management Briefing Seminars in Traverse City, MI.

Honda NA Updates Welding System, Takes Surgical Approach to Other Upgrades

Honda was able to make the new Fit's body lighter and more rigid thanks to the new process, which will become the standard in North America.

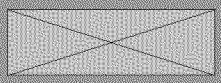
FULL ARTICLE

Automotive Beckons to Aluminum Pop-Can King Novelis

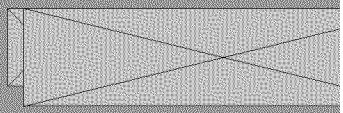
The aluminum producer now has several new alloys promising better strength or new formability in the process of approval by customers.

FULL ARTICLE

Now!







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To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 8/5/2014 10:19:54 AM
Subject: 2013 CAFE/GHG Reports in Verify

Hi Dave;

As we discussed yesterday, Dale Harris sent you a copy of the GHG report that was entered into Verify. Were you able to read this file and were you able to locate this April 30th letter with attachments in Verify? We were not able to find a tool to locate or see it in Verify.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Tue 8/5/2014 4:59:53 PM
Subject: FW: VW Ex. 4 - CBI

Ex. 4 - CBI

Hello Bill,

Please find enclosed the Laboratory Test Data Ex. 4 - CBI

If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

From: Bochenek, David
Sent: Tuesday, August 05, 2014 9:52 AM
To: Mazaitis, Vincent
Subject: VW Ex. 4 - CBI

Vince,

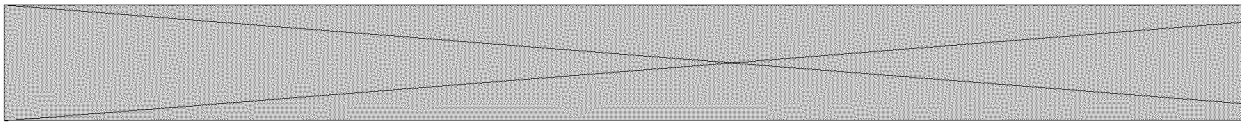
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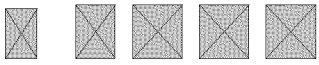
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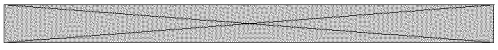
Dave

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 8/6/2014 2:03:50 AM
Subject: CONFERENCE DAY 2: GM to launch more diesels | Why automakers can't beat up suppliers | Wake-up call for voice recognition | China's aftermarket promise

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August 5, 2014

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Complete online coverage of the CAR Management Briefing Seminars from Traverse City, Mich.

GM plans to launch more diesel vehicles in U.S.

General Motors will launch more cars and light trucks with diesel engines in the United States in the coming years. Steve Kiefer, GM's vice president of global powertrain, today said diesels in cars and light trucks could grow to 10 percent of the market in the United States by 2020. ... story

Fuel regs will stymie industry after 2018, NADA economist says

The federal targets for higher vehicle fuel efficiency will curb the industry's ability to sell more cars after the end of this decade, a leading economist predicts. ... story

N.A. auto market seen outshining other regions,

despite threats

Auto sales will continue to rise in North America through 2020 despite lingering effects of the 2009 recession, economist Jeff Schuster predicted today. ...
story

TC BUZZ

LINDSAY CHAPPELL

Automakers to get rude wake-up call on voice recognition

Check your pride at the door Wednesday afternoon when JD Power plans to lay into the auto industry for one of the most poorly executed technologies it peddles to consumers -- voice recognition.
Published: Aug 5 11:41 am U.S. Eastern time

RICHARD TRUETT

How GM missed the truck fuel economy race, and how it will return

The pickup truck fuel economy race is between Chrysler's Ram 1500 and the upcoming aluminum-bodied F-150 coming late this year. But the Chevrolet Silverado and GMC Sierra should've been contenders.
Published: Aug 5 11:17 am U.S. Eastern time

LARRY P. VELLEQUETTE

Why a squeeze is coming to auto dealers

Take note: there is a squeeze coming to an auto dealer near you. Two important factors to new automotive sales -- low interest rates and relatively high values for used automobiles – are forecast to move in unwelcome directions.
Published: Aug 5 10:28 am U.S. Eastern time

DAVID SEDGWICK

Why automakers can't beat up suppliers any more

Remember the old days when automotive purchasing czars such as General Motors' Inaki Lopez and Ford's Carlos Mazzorin threw their weight around with suppliers? Those days are gone.
Published: Aug 5 2:00 pm U.S. Eastern time

Auto sales would be higher in 'normal' recovery, researcher says

If this were a normal recovery, the auto industry should be selling a lot more cars than it is this year, says an economist. ... story

Suppliers see promise in China's aftermarket

Aging vehicles mean need for replacement parts will increase

The global replacement parts business likely will become even more appealing to automotive suppliers. ... story

Less costly head-up displays are catching on

Head-up displays, mainly at home in sports cars and luxury models, are about to go mainstream. ... story

Apply for PACE Awards by Aug. 29

Suppliers have until Aug. 29 to apply for the 2015 Automotive News PACE Awards, which recognize innovation. ... story

Despite its speed, the Camaro still has road manners

It's reasonable to assume that the 2014 Chevrolet Camaro Z/28, which has the power and ambition to run with Porsche 911s and Nissan GT-Rs, would be a bear to drive. Except it isn't. ... story

Visteon climate module adds cabin space

Supplier consolidates numerous HVAC parts in the engine bay

Visteon Corp. engineers have developed a heating and air conditioning unit that would create significantly more cabin space. ... story

Valeo wins light competition for Escalade

Supplier: Cadillac sought 'sculptural, high-tech' look

The lights on the Cadillac Escalade, engineered and produced by French supplier Valeo, were designed from the start to separate the SUV's styling from the competition. ... story

California prepares for hydrogen fuel stations

Now that Toyota and other automakers are preparing to introduce fuel-cell vehicles in California, entrepreneurs are starting to build a network of hydrogen fuel stations. ... story

Auto sales suffer when young adults work only part-time, economist says

New-vehicle sales are climbing steadily, but they are still depressed by a lack of full-time jobs for young adults, an economist said. ... story

Center of North American auto industry moves further southwest, IHS says

The geographic center point of the North American auto

industry, which was located in central Illinois in 2000, has now crossed south into Arkansas from Missouri and moving southwest about 14 miles a. ... story

North American tooling demands growing from foreign automakers

As North American production rises, Asian and European automakers are asking their tool-and-die suppliers to set up shop in North America, a consultant says. ... story

At the half: Top 25 North American plants and models

Each issue of the *Traverse City Daily* features production highlights for the first half of 2014. ... story

Suppliers to the 2015 Mercedes-Benz C class

Suppliers to the 2015 Mercedes-Benz C class includes Eagle Ottawa, Huf Huelsbeck & Fuerst, Harman, Grammer, Takata, Stabilus, Carcoustics, LuK, KSPG Automotive, FAIST ChemTec, Profil, Filtran, ZF... ... story

Suppliers to the 2015 BMW X4

Suppliers to the 2015 BMW X4 include BorgWarner, Gustav Wahler, Montaplast, Angell-Demmel, Grammer, Nippon Seiki, Benecke- Kaliko, Guelph Tool, Sika, APAG Elektronik, Toyoda Gosei, P&R Fasteners,... ... story

Hybrid technology helps fuel transmission transformation

ZF, Schaeffler adapt their gearboxes for a variety of new uses

Transmission manufacturers such as ZF Friedrichshafen AG are adapting their transmissions for use in plug-in hybrid vehicles by replacing the torque converter with an electric motor. ... story

Auto suppliers have until Aug. 29, 2014 to apply for the 2015 Automotive News PACE Awards. The awards, which are co-sponsored by EY and the Transportation Research Center Inc., recognize suppliers for innovations in four categories: Product, Manufacturing Process and Capital Equipment, Information Technology and Open.

Winners will be announced at a gala awards ceremony on April 20, 2015, in Detroit. The Automotive News PACE Awards program is open to all automotive suppliers. The application fee is $1,500. To apply, visit www.autonews.com/pace. Questions? Call 313-446-6039.

Video

GM's Google Glass trial and other visions of future factories

General Motors is experimenting with Google Glass to improve quality on the factory floor. American Axle is building a tech center to train tomorrow's workers. A

software company envisions employee uniforms that stream data. These are just a few ways automakers and suppliers are gearing for a hypercompetitive future while attracting new talent to the auto industry.

Watch the video

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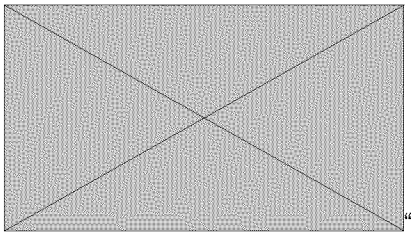
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WardsAuto OEM Edition

August 6, 2014

Augmented Reality May Be Game Changer for Vehicle Interiors



"It is the first step into a new form of communication between vehicles and drivers," says Eelco Spoelder, head of the Continental Instrumentation & Driver HMI business unit.

FULL ARTICLE

Gallery: Continental's Augmented Reality Head-Up Display

Auto supplier Continental is looking to move the bar for both head-up displays and the human-machine interface in general by adding augmented-reality features to a new HUD that will go into production in 2017.

Video: Augmented Reality Turning Guidance

Continental's AR-HUD concept, due to go into production in 2017, offers adaptive cruise control functions, lane-departure warning and navigational features that encourage drivers to focus on the road ahead and not look down at the center-stack display during critical maneuvers.

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Protomold Protogami
Protogami's three-dimensional flexagons create a continual kaleidocycle that exposes a different set of triangular faces with each turn of its living

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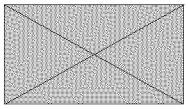
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Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

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hinges. The design aid lets product designers and engineers see commonly used materials like ABS, PC and acetal, and how they interact with difference surface finishes. Register for a free Protogami today.

Autoline Daily


Toyota and BMW Post Profits; Sorento Interior Teased; Most Vulnerable Cars to Hack

Suppliers Wild Card in North American Output Surge

“The industry is in good shape. We’re not over our skis,” Visteon CEO Tim Leuliette says. “Not just Visteon, but as an industry we are all running pretty good balance sheets and being very conservative.”

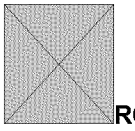
FULL ARTICLE

VW Working on FCVs, Sustainable Fuels

Volkswagen has developed a new engine that works well with B20 diesel. But the fuel in the U.S. is not as stable as the product elsewhere, so the new engine will be available in Canada but not the U.S.

FULL ARTICLE

Mercedes Diesel Does It


ROAD AHEAD BLOG
We drove a Mercedes' M-Class diesel to the annual Management Briefing Seminars in Traverse City, MI. Our verdict: Diesel does it.

FULL ARTICLE

Hold Your Horses, Self-Driving Production Cars Long Way Off

“The last thing we want to do is bring technologies to market with unintended consequences,” says John Capp of GM.

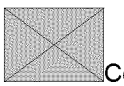
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Special Report: 2014 CAR Management Briefing Seminars

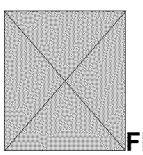
 Complete coverage of the 2014 CAR Management Briefing Seminars in Traverse City, MI.

Pricing for '15 Chevy Colorado, GMC Canyon to Start at $20,995

While pricing always plays a key role in marketing, it will be particularly important to hit the sweet spot with the Colorado and Canyon: too steep and it risks overlapping GM's large pickups, too cheaply and it saps profitability.

FULL ARTICLE

The Motor City Is Still the Motor City

 **FINAL INSPECTION BLOG**
Cars and SUVs still are manufactured in the beleaguered city, which is emerging from bankruptcy and whose population has sunk to under 700,000, one-third that of its heyday in the 1950s.

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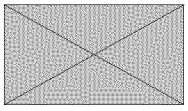
Study Says Poor Supplier Relations Have Cost Automakers Billions

If Chrysler's supplier relations were as positive in 2000-2012 as they are today, the automaker would have booked $1,052 more in profit per unit, equaling $2 billion annually, Planning Perspectives says.

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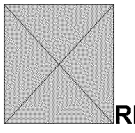
 GM Subpoenaed on Subprime; Mercedes Prices C-Class; Tesla Vs. UberX

Cadillac Looks to Grow Compact Presence With ATS Coupe

Style and driving dynamics are seen as key draws to the new 2-door ATS.

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Tesla Is Wrong, Franchise System Is Better

 **RETAIL FRONT BLOG**
The biggest irony of the automotive industry is the companies that make cars and trucks don't know how to sell them.

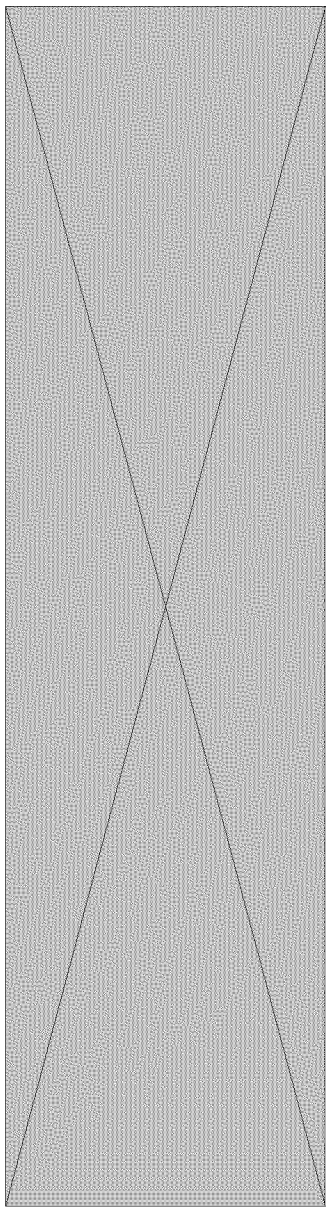
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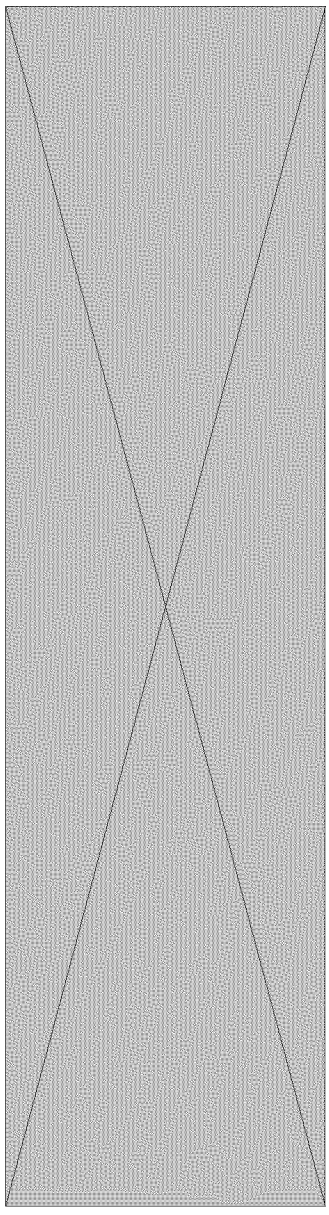
Jaguar Land Rover Acquires Vintage-Car Collection

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Jaguars comprise about one-quarter of the 543-vehicle collection amassed by James Hull, a British car enthusiast, entrepreneur and philanthropist.

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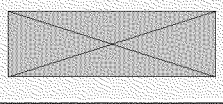
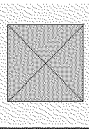
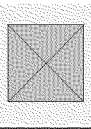
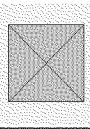
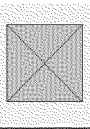
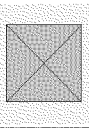
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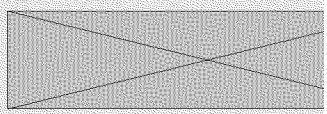
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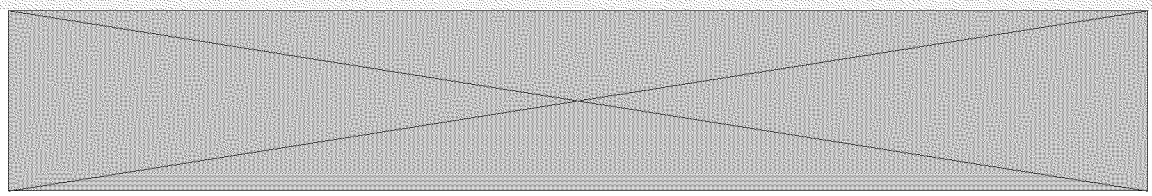
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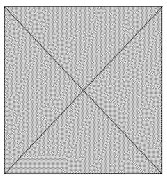
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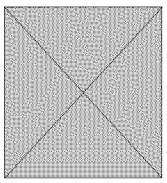
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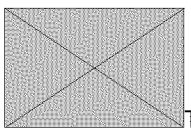
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Fuel-Cell Sales, Tesla Wins Trademark Fight, 2015 Chevy Colorado Pickup Priced: Today's Car News

Aug 06, 2014 03:32 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today on Green Car Reports: Why Toyota, Hyundai, and Honda will probably sell fewer fuel-cell vehicles than you think, Tesla wins a Chinese trademark battle, and the 2015 Chevrolet Colorado and GMC Canyon mid-size pickups will start around $21,000. All this and more on Green Car Reports. The 2015 Volkswagen e-Golf electric car and 2016 Audi A3...

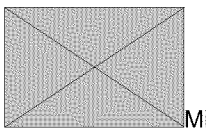
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Nissan And Mitsubishi To Join Forces On Low-Cost Electric Minicar

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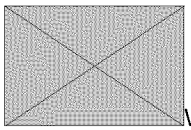
 Mitsubishi was the earliest maker to launch a modern battery-electric small car and sell it in volume, and Nissan has emerged as by far the world's highest-volume seller of electric cars. Now the two makers have announced they're teaming up to develop an

inexpensive electric minicar. According to Nikkei, it will go into production before the end...

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Toyota, Honda, Hyundai Fuel-Cell Cars: How Many Will Be Sold?

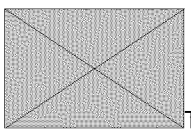
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 With almost 250,000 plug-in electric cars on U.S. roads--and double that number globally--electric vehicles are starting to establish a small foothold in the market. More than 10,000 a month were sold this past May, June, and July. But with hydrogen fuel-cell vehicles now offered by Hyundai, and coming next year from Toyota and Honda, how many...

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Tesla Resolves Chinese Trademark Fight 'Completely, Amicably'

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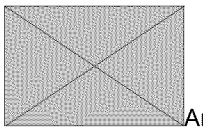
 Tesla seems finally to have resolved its copyright issues in China. Thanks to a local "trademark troll," the electric-car maker was initially forced to sell cars in China with no name. The issue had appeared to be resolved when a Chinese court ruled in favor of Tesla, but then last month, the company was slapped with a lawsuit. Now, Tesla says it...

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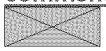
2015 Chevy Colorado, GMC Canyon Prices: $21K And Up, $5K Lower Than Full-Size Pickups

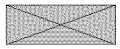
Aug 06, 2014 12:30 pm | feedback@highgearmedia.com

(Antony Ingram)

 Americans love their trucks, and in recent years it's a sector that has finally begun to make a push for fuel efficiency. While truly gas-sipping small trucks no longer exist, the mid-size truck market has revitalized itself recently and the 2015 Chevrolet Colorado and 2015 GMC Canyon are next to arrive. Importantly, each comes in at a healthy...

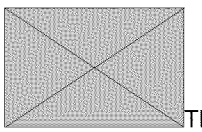
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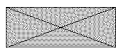
What's Inside Chevrolet Volt Battery Pack And Drivetrain? Video Teardown Shows All

Aug 06, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 There's a childish pleasure in seeing something disassembled to its component parts, whether it's a jigsaw puzzle, Lego set or an entire car. The Chevrolet Volt is new enough that you're unlikely to see too many broken up at scrapyards right now, but crash-damaged ones still give some individuals the opportunity to explore its workings in greater...

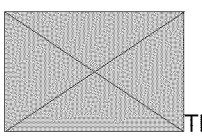
comments | read more





2015 Honda Civic Gas Mileage: 45-MPG Hybrid, 33-MPG Regular Models Unchanged

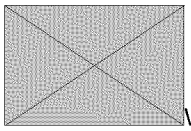
Aug 06, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 The Honda Civic is a renowned gas-sipper in the compact car market and the latest iteration of the hybrid model is no exception. For 2015, the Civic Hybrid continues the 2014 car's gas mileage of 45 mpg combined (44 mpg city, 47 mpg highway), itself an improvement on the 2013 model's 44 mpg all-round. Now that the Honda Insight is waving goodbye...

comments | read more

2015 VW e-Golf, 2016 Audi A3 e-tron Get Carbon Offset Program, Offer Of Home-Solar Systems

Aug 06, 2014 11:00 am | feedback@highgearmedia.com (Stephen Edelstein)

 When it comes to carbon emissions, there's more to consider than what comes out of a car's tailpipe (if it has one). For buyers looking to cancel out the emissions involved in producing, delivering, and charging plug-in cars, carbon offset programs could be the answer. Now the Volkswagen Group has announced a carbon-offset program for its upcoming...

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To: Wehrly, Linc[wehrly.linc@epa.gov]
Cc: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov];
Henrietta.Dandy@dot.gov[Henrietta.Dandy@dot.gov]
From: Good, David
Sent: Wed 8/6/2014 10:18:18 PM
Subject: There are some CAFE/GHG reports in the queue for signing

Linc,

There should be Tesla, 2 Porsches (GHG only) and 2 VW's---if I can finish them tonight.

Harry, These should be signed Thursday. The 2013 VW CAFEs include Porsche. Please disregard the separate Porsche GHG calculations---as they are only for EPA---but are sent electronically to your mailbox with all the CAFE calculations & letters.

Dave

To: Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7
Ex. 7 @volkswagen.de]
Cc: Ex. 7
Ex. 7 @vw.com]; Ex. 7
Ex. 7
From: Ex. 7
Sent: Thur 8/7/2014 7:26:54 PM
Subject: RE: Verbal Ex. 4 - CBI om EPA

Thanks Jim for the clarification and support.

After discussion with Hannah it was determine that no Ex. 4 - CBI was provided although there was a comment that the values were within tolerances of Ex. 4 - CBI

If available we would be interested in a look at Ex. 4 - CBI

Thanks

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, August 07, 2014 3:22 PM
To: Ex. 7
Cc: Ex. 7 ; Ex. 7
Subject: RE: Verbal Ex. 4 - CBI from EPA

Correct, those are unadjusted but I did look at the Ex. 4 - CBI I can't guarantee any official data by tomorrow. It depends if they hold it up waiting for the Ex. 4 - CBI Ex. 4 - CBI

-Jim

From: Ex. 7 @vw.com]
Sent: Thursday, August 07, 2014 3:02 PM
To: Ex. 7 Snyder, Jim
Cc: Ex. 7 Ex. 7
Subject: Verbal Ex. 4 - CBI from EPA

Hello Jim: Thanks for the call with the information below. As we discussed if you can ask the lab staff to expedite results for Friday if possible, it would be greatly appreciated.

@ Ex. 7

I just got a call from Jim with (partial) verbal results listed below. Ex. 4 - CBI

Ex. 4 - CBI

Also, Jim will be out of the office tomorrow so we should follow up with Vince.

Ex. 4 - CBI

Ex. 4 - CBI

From: Ex. 7
Sent: Thursday, August 07, 2014 7:48 AM
To: Ex. 7
Cc: Ex. 7
Subject: RE: VW Ex. 4 - CBI

Just an update.

They now expect to start Ex. 4 - CBI at 9 or so.

From: Ex. 7
Sent: Wednesday, August 06, 2014 4:18 PM
To: Ex. 7
Cc: Ex. 7 Ex. 7
Subject: FW: Ex. 4 - CBI

FYI

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, August 06, 2014 4:17 PM
To: Ex. 7
Subject: RE: Ex. 4 - CBI

I talked to the lab and they were prepping the car at that time. Still on track to test Thursday.

From: Ex. 7 @vw.com]
Sent: Wednesday, August 06, 2014 1:01 PM
To: Snyder, Jim
Cc: Ex. 7
Ex. 7 ; Mazaitis, Vincent

Subject: RE: Ex. 4 - CBI

Hello Jim,

Thanks for the update.

Ex. 4 - CBI

Please keep us advised of the test schedule. At this time Bill and Hannah are planning to be there Thursday morning.

Regards

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, August 05, 2014 6:21 PM
To: Ex. 7
Cc: Ex. 7; Mazaitis, Vincent; Wehrly, Linc
Subject: VW Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Thur 8/7/2014 8:06:37 PM
Subject: RE: Verbal Golf Numbers from EPA

I didn't get the FE numbers I thought Vince did. He did say they were very good, within 1% of MFRs.

From: Ex. 7 @vw.com]
Sent: Thursday, August 07, 2014 3:27 PM
To: Snyder, Jim; Schlueter, Ex. 7
Cc: Ex. 7
Subject: RE: Verbal Golf Numbers from EPA

Thanks Jim for the clarification and support.

After discussion with Ex. 7 it was determine that no FE data was provided although there was a comment that the values were within tolerances of Mfr test (3%).

If available we would be interested in a look at FE.

Thanks

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, August 07, 2014 3:22 PM
To: Ex. 7
Cc: Ex. 7
Subject: RE: Verbal Golf Numbers from EPA

Correct, those are unadjusted but I did look at the DFs and DAFs to confirm passing values. I can't guarantee any official data by tomorrow. It depends if they hold it up waiting for the PM results.

-Jim

From: Ex. 7 @vw.com]
Sent: Thursday, August 07, 2014 3:02 PM
To: Ex. 7 ; Snyder, Jim
Cc: Ex. 7
Subject: Verbal Golf Numbers from EPA

Hello Jim: Thanks for the call with the information below. As we discussed if you can ask the lab staff to expedite results for Friday if possible, it would be greatly appreciated.

Ex. 7

I just got a call from Jim with (partial) verbal results listed below. I believe no DF or UAF has been applied to these numbers.

Also, Jim will be out of the office tomorrow so we should follow up with Vince.

FTP :

CO 0.1

NMOG 0.036

NOx 0.026

FE: No verbal given (provided already by Vince)

HFET :

NOx 0.0001

NMOG: No verbal given

FE: No verbal given (provided already by Vince)

From: Ex. 7
Sent: Thursday, August 07, 2014 7:48 AM
To: Ex. 7
Cc: Ex. 7
Subject: RE: VW Golf: Shift schedule successfully loaded, but...

Just an update.

They now expect to start the FTP at 9 or so.

From: Ex. 7
Sent: Wednesday, August 06, 2014 4:18 PM
To: Ex. 7
Cc: Ex. 7
Subject: FW: VW Golf: Shift schedule successfully loaded, but...

FYI

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, August 06, 2014 4:17 PM
To: Ex. 7
Subject: RE: VW Golf: Shift schedule successfully loaded, but...

I talked to the lab and they were prepping the car at that time. Still on track to test Thursday.

From: Ex. 7 @vw.com]
Sent: Wednesday, August 06, 2014 1:01 PM
To: Snyder, Jim
Cc: Ex. 7
Ex. 7
Subject: RE: VW Golf: Shift schedule successfully loaded, but...

Hello Jim,

Thanks for the update.

I discussed the re-start procedure with Ex. 7. In the future we are working to have dyno mode more easily configured ahead of time in the software for more of our vehicles.

For the Golf, as a precaution please see steps 5 and 6 of the ESP deactivation procedure which are highlighted in yellow (page 3) of the attached document.

Please keep us advised of the test schedule. At this time Ex. 7 are planning to be there Thursday morning.

Regards

Mike

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, August 05, 2014 6:21 PM
To: Ex. 7
Cc: Ex. 7 Mazaitis, Vincent; Wehrly, Linc
Subject: VW Golf: Shift schedule successfully loaded, but...

Well, as some of you may have heard, The lab was able to fix the problem and finally load the shift schedule near the end of the day. We watched it run during bag 2 and it looked fine. The Hwy would then run in the morning

Unfortunately after we left the cell, the driver was apparently too slow with the restart sequence (must do something within 5 seconds of key on?) and the vehicle went into some ABS fault mode on the hot start. The test voided. I was tentatively told it may re-test Thursday but that bears discussion tomorrow morning.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]; Buller, Patrick[patrick.buller@volvocars.com]; chris.mccarthy@gm.com[chris.mccarthy@gm.com]; sconrad@hatci.com[sconrad@hatci.com]; Tom Beierschmitt (TEMA TTC)[tom.beierschmitt@tema.toyota.com]; mky@chrysler.com[mky@chrysler.com]; dennis.pawlak@na.mitsubishi-motors.com[dennis.pawlak@na.mitsubishi-motors.com]; douglas.reid@na.mitsubishi-motors.com[douglas.reid@na.mitsubishi-motors.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; William Beggs[william.beggs@gm.com]; Ryan McGavock[DRM202@chrysler.com]; Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]; nokawa@mazdausa.com[nokawa@mazdausa.com]; Duoba, Michael J.[mduoba@anl.gov]; Roxanne Loeffler[rloeffler@sae.org]; Yuhase, Nicole (L.)[nyuhase@ford.com]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Ellies, Ben[ellies.ben@epa.gov]; Bowu Reed[bowu.reed@na.mitsubishi-motors.com]
Cc: mark.a.theobald@gm.com[mark.a.theobald@gm.com]
From: Wright, DavidA
Sent: Thur 8/7/2014 9:48:59 PM
Subject: Proposed August Meeting Date for J3066 Task Force

I would like to propose a revision to the meeting date for the August Task Force meeting. I propose the next meeting for the J3066 Task Force take place on Wednesday, August 20 from 1 til 3 pm at the EPA office on Traverwood in Ann Arbor, we had previously discussed meeting on Thursday, August 21. Let me know if Wednesday, August 20th will not work for any Task Force members.

Thanks,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

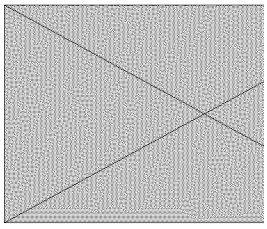
E-mail: wright.davida@epa.gov

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Fri 8/8/2014 8:00:33 AM
Subject: Special MBS Coverage: Toyota Holding Off on Adding Capacity in U.S.

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WardsAuto OEM Edition

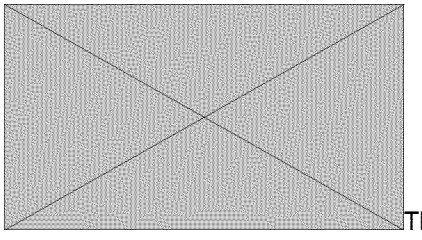
August 8, 2014



WardsAuto OEM Special Edition: 2014 CAR Management Briefing Seminars

Complete coverage of this week's MBS conference in Traverse City, MI.

Second-Gen Chevy Volt to Debut at Detroit Auto Show



The new plug-in hybrid will offer improvements in technology and design, says Tim Mahoney, Chevy's marketing chief.

FULL ARTICLE

RACER Cleaning Up Old GM

The RACER Trust, formed as a result of GM's bankruptcy, is pushing to move some prime remaining sites. The organization so far has completed 31 transactions.

FULL ARTICLE

Flawed Voice-Recognition Systems Seem Hard of Hearing

In-vehicle voice-activated systems rank poorly in customer-satisfaction ratings.

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Bringing new vehicles to market has never been more challenging. Not only are new vehicles more complex than ever before, but supply chains are stretched, consumers are more demanding and even small delays can cost millions of dollars per model.

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 Complete coverage of the 2014 CAR Management Briefing Seminars in Traverse City, MI.

Toyota Holding Off on Adding Capacity in U.S.

Improving its productivity to utilize existing machine capacity is Toyota's "first priority" in North American manufacturing, a top company official says.

FULL ARTICLE

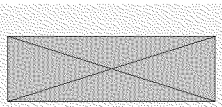
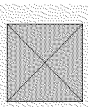
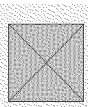
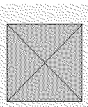
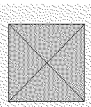
China to Remain Best of the BRICs

Toyota and Fiat-Chrysler are among the laggards in China, trailing by a wide margin leaders GM and VW, which now sell more than 30% of their global volume in the market.

FULL ARTICLE

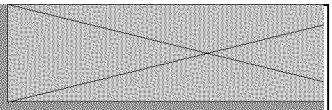
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To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Schlueter, Hannah (EASZ/1)[hannah.schlueter@volkswagen.de]
From: Rodgers, William (EEO)
Sent: Fri 8/8/2014 11:22:06 AM
Subject: RE: Ex. 4 - CBI

Thanks Vince.

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Friday, August 08, 2014 6:53 AM
To: Rodgers, William (EEO)
Cc: Snyder, Jim; Schlueter, Hannah (EASZ/1)
Subject: Ex. 4 - CBI

Please find enclosed the Ex. 4 - CBI If you have any questions or concerns, please contact me.

Thank You,

Vincent Mazaitis

(734)214-4864

Vince Mazaitis

To: Wright, DavidA[Wright.DavidA@epa.gov]
From: Sigelko, Jenny (EEO)
Sent: Fri 8/8/2014 12:17:51 PM
Subject: RE: Proposed August Meeting Date for J3066 Task Force

I'm available until about 2:30 on 8/20, and all day 8/21.

Thanks

Jenny

Jenny Sigelko

Volkswagen Group of America

EEO-Auburn Hills MI

248 754 4214

Jenny.Sigelko@VW.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Thursday, August 07, 2014 5:49 PM
To: Tommy_Chang@ahm.honda.com; Buller, Patrick; chris.mccarthy@gm.com; sconrad@hatci.com; Tom Beierschmitt (TEMA TTC); mky@chrysler.com; dennis.pawlak@na.mitsubishi-motors.com; douglas.reid@na.mitsubishi-motors.com; Paulina, Carl; Chris Nevers; Glodich, Jeffrey (J.M.); William Beggs; Ryan McGavock; Sigelko, Jenny (EEO); nokawa@mazdausa.com; Duoba, Michael J.; Roxanne Loeffler; Yuhase, Nicole (L.); yosuke_sato@ahm.honda.com; Ellies, Ben; Bowu Reed
Cc: mark.a.theobald@gm.com
Subject: Proposed August Meeting Date for J3066 Task Force

I would like to propose a revision to the meeting date for the August Task Force meeting. I propose the next meeting for the J3066 Task Force take place on Wednesday, August 20 from 1

til 3 pm at the EPA office on Traverwood in Ann Arbor, we had previously discussed meeting on Thursday, August 21. Let me know if Wednesday, August 20th will not work for any Task Force members.

Thanks,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

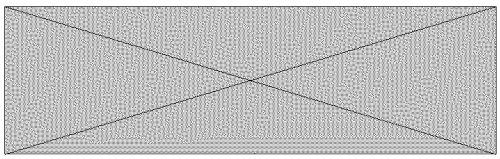
E-mail: wright.davida@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/8/2014 2:30:02 PM
Subject: A.M. NEWSCAST: Car-theft danger in the air | Delayed recall costs Hyundai $17.35 million | VW cost-cut setback | Another subprime lender subpoenaed | GM's missing car owners

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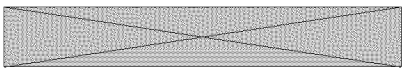
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Hyundai fined $17.35M »

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From: NBC News Top Stories
Sent: Fri 8/8/2014 2:56:02 PM
Subject: VW Expands Recall for Faulty Ignition Switch
MAIL_CONVERSATION_TOPIC: VW Expands Recall for Faulty Ignition Switch
Created: Fri 3/18/2016 6:18:42 PM

Volkswagen is expanding a recall of its Routan minivans because of ignition switches that can be knocked out of the drive position..

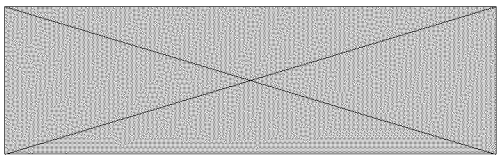
View article...

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/8/2014 7:50:14 PM
Subject: P.M. NEWSCAST: GM's new pickup payload math | More GM, VW recalls | BMW drives in circles | Dodge in 'Pursuit' of police

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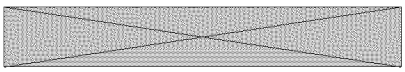
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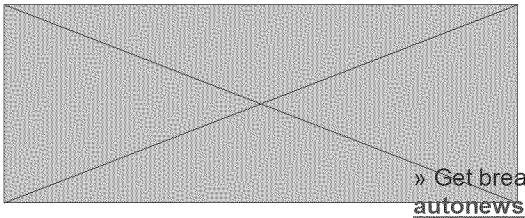
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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 8/8/2014 8:13:06 PM
Subject: DAILY: Victims' claims for GM compensation pour in | GM issues 5 more recalls | Audi closes in on BMW | Lexus to unleash LFA successor | Toyota: Supporter of Korean culture

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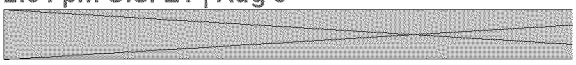
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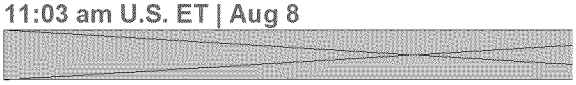
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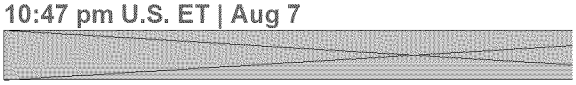
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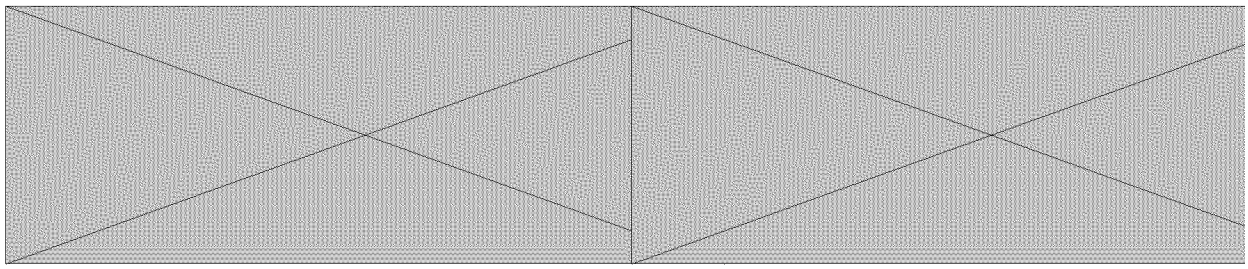
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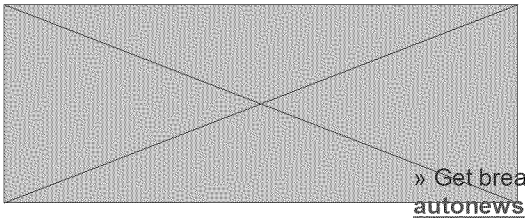
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From: Automotive News
Sent: Fri 8/8/2014 8:13:08 PM
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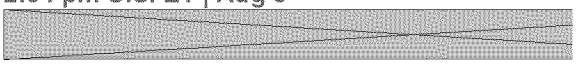
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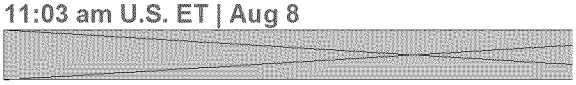
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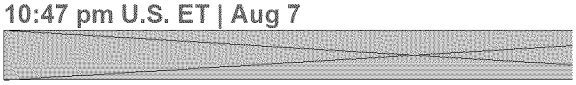
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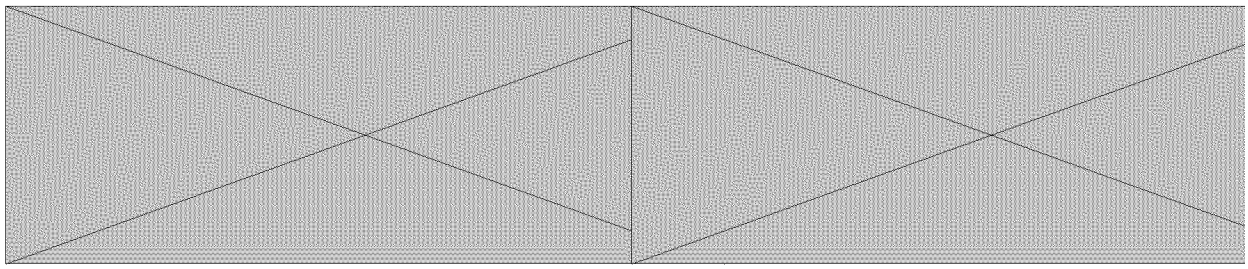
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To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Fri 8/8/2014 9:28:05 PM
Subject: RE: re: 2015 FE Guide - Errors in EPA's data base as of August 1, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-8-8-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of August 8, 2014

Attached are the data in Verify as of August 8, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on Aug 15, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl	
		2015 Volkswagen	Audi Group of	A3	VGA 7	1.8	4	
Diesel;		2015 Volkswagen	Audi Group of	A3	VGA 101	2.0	4	
		2015 Volkswagen	Audi Group of	A3 Cabriolet	VGA 6	1.8	4	
		2015 Volkswagen	Audi Group of	A3 Cabriolet quattro	VGA 5	2.0	4	
		2015 Volkswagen	Audi Group of	A3 quattro	VGA 4	2.0	4	
		2015 Volkswagen	Audi Group of	A4	VGA 46	2.0	4	
Relabeled.	Please include in	2015 Volkswagen	Audi Group of	A4 quattro	VGA 64	2.0	4	the reason and regulations for relabeling (if not already pro
		2015 Volkswagen	Audi Group of	A4 quattro	VGA 49	2.0	4	
		2015 Volkswagen	Audi Group of	A5 Cabriolet quattro	VGA 66	2.0	4	
Relabeled.	Please include in	2015 Volkswagen	Audi Group of	A5 quattro	VGA 65	2.0	4	the reason and regulations for relabeling (if not already pro
		2015 Volkswagen	Audi Group of	A5 quattro	VGA 50	2.0	4	
		2015 Volkswagen	Audi Group of	A6	VGA 47	2.0	4	
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 48	2.0	4	
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 72	3.0	6	
Diesel;		2015 Volkswagen	Audi Group of	A6 quattro	VGA 17	3.0	6	
		2015 Volkswagen	Audi Group of	A7 quattro	VGA 71	3.0	6	
Diesel;		2015 Volkswagen	Audi Group of	A7 quattro	VGA 18	3.0	6	
		2015 Volkswagen	Audi Group of	A8	VGA 40	3.0	6	
		2015 Volkswagen	Audi Group of	A8	VGA 11	4.0	8	
Diesel;		2015 Volkswagen	Audi Group of	A8L	VGA 15	3.0	6	
		2015 Volkswagen	Audi Group of	A8L	VGA 41	3.0	6	
		2015 Volkswagen	Audi Group of	A8L	VGA 10	4.0	8	
		2015 Volkswagen	Audi Group of	A8L	VGA 14	6.3	12	
		2015 Volkswagen	Audi Group of	allroad quattro	VGA 68	2.0	4	
		2015 Volkswagen	Audi Group of	Q3	VGA 62	2.0	4	
		2015 Volkswagen	Audi Group of	Q3 quattro	VGA 37	2.0	4	
		2015 Volkswagen	Audi Group of	Q5	VGA 67	2.0	4	
		2015 Volkswagen	Audi Group of	Q5	VGA 70	3.0	6	
Diesel;		2015 Volkswagen	Audi Group of	Q5	VGA 16	3.0	6	
Hybrid;		2015 Volkswagen	Audi Group of	Q5 Hybrid	VGA 63	2.0	4	
Diesel;		2015 Volkswagen	Audi Group of	Q7	VGA 12	3.0	6	
		2015 Volkswagen	Audi Group of	Q7	VGA 51	3.0	6	
		2015 Volkswagen	Audi Group of	R8	VGA 27	4.2	8	
		2015 Volkswagen	Audi Group of	R8	VGA 29	4.2	8	
		2015 Volkswagen	Audi Group of	R8	VGA 35	5.2	10	
		2015 Volkswagen	Audi Group of	R8	VGA 33	5.2	10	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 26	4.2	8	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 28	4.2	8	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 34	5.2	10	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 32	5.2	10	
		2015 Volkswagen	Audi Group of	RS5	VGA 30	4.2	8	
		2015 Volkswagen	Audi Group of	RS5 Cabriolet	VGA 31	4.2	8	
Relabeled.	Please include in	2015 Volkswagen	Audi Group of	RS7	VGA 21	4.0	8	the reason and regulations for relabeling (if not already pro
		2015 Volkswagen	Audi Group of	S3	VGA 42	2.0	4	
		2015 Volkswagen	Audi Group of	S4	VGA 73	3.0	6	
		2015 Volkswagen	Audi Group of	S4	VGA 76	3.0	6	
		2015 Volkswagen	Audi Group of	S5	VGA 74	3.0	6	
		2015 Volkswagen	Audi Group of	S5	VGA 77	3.0	6	
		2015 Volkswagen	Audi Group of	S5 Cabriolet	VGA 75	3.0	6	
		2015 Volkswagen	Audi Group of	S6	VGA 20	4.0	8	
		2015 Volkswagen	Audi Group of	S7	VGA 19	4.0	8	
		2015 Volkswagen	Audi Group of	S8	VGA 9	4.0	8	

	2015	Volkswagen Group of	SQ5	VGA	69	3.0	6	
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	2015	Volkswagen Group of	TT Roadster quattro	VGA	3	2.0	4	
	2015	Volkswagen Group of	Continental GT	VGA	24	4.0	8	
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	2015	Volkswagen Group of	Continental GT Convertible	VGA	22	4.0	8	
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	2015	Volkswagen Group of	Flying Spur	VGA	23	4.0	8	
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	2015	Volkswagen Group of	Mulsanne	VGA	61	6.8	8	
	2015	Volkswagen Group of	Veyron	VGA	60	8.0	16	
	2015	Volkswagen Group of	Aventador Coupe	VGA	52	6.5	12	
	2015	Volkswagen Group of	Aventador Roadster	VGA	53	6.5	12	
	2015	Volkswagen Group of	Huracan	VGA	25	5.2	10	
	2015	Volkswagen Lamborghini	Veneno Roadster	VGA	54	6.5	12	
	2015	Volkswagen Volkswagen	Beetle	VGA	79	1.8	4	
	2015	Volkswagen Volkswagen	Beetle	VGA	78	1.8	4	
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	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	80	1.8	4	
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	82	2.0	4	
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	2015	Volkswagen Volkswagen	CC	VGA	59	2.0	4	
	2015	Volkswagen Volkswagen	CC 4Motion	VGA	56	3.6	6	
	2015	Volkswagen Volkswagen	Eos	VGA	36	2.0	4	
	2015	Volkswagen Volkswagen	Golf	VGA	103	1.8	4	
	2015	Volkswagen Volkswagen	Golf	VGA	85	1.8	4	
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	100	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	104	2.0	4	
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	2015	Volkswagen Volkswagen	Jetta	VGA	98	1.8	4	
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	2015	Volkswagen Volkswagen	Jetta	VGA	99	2.0	4	
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Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	105	2.0	4	
	2015	Volkswagen Volkswagen	Jetta	VGA	94	2.0	4	
	2015	Volkswagen Volkswagen	Passat	VGA	90	1.8	4	
	2015	Volkswagen Volkswagen	Passat	VGA	88	1.8	4	
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	89	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	87	2.0	4	
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	2015	Volkswagen Volkswagen	Tiguan	VGA	39	2.0	4	
	2015	Volkswagen Volkswagen	Tiguan 4Motion	VGA	38	2.0	4	
Diesel;	2015	Volkswagen Volkswagen	Touareg	VGA	13	3.0	6	
	2015	Volkswagen Volkswagen	Touareg	VGA	57	3.6	6	

Hybrid; ErrY	2015	VolkswageVolkswage	Touareg HVGA	106	3.0	6

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	31	43	36				41.0359	61.6186	48.2955
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
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Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.7000	39.2000	31.1732
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	15	25	18				17.8763	33.1799	22.5584
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995

Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S7)	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S6)	31	41	34	40.2000	57.8000	46.5830
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S6)	30	40	34	39.7000	56.5000	45.8327
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(S6)	25	36	29	32.5000	51.1000	38.8661
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	31	43	36	41.0359	61.6186	48.2955
Manual(M6)	31	45	36	40.4000	65.2000	48.7432
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(S6)	25	37	30	32.7401	52.6000	39.4414
Manual(M5)	25	37	29	32.3787	52.4790	39.1216
Auto(AM-S6)	24	32	27	29.5595	44.4600	34.8093
Auto(AM-S6)	31	45	36	41.3000	64.1000	49.1703
Auto(S6)	23	34	26	28.7000	47.5000	34.9193
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Manual(M6)	31	46	36	40.2000	65.6000	48.6823
Manual(M6)	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M5)	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S6)	30	42	34	38.7000	59.9000	46.0312
Manual(M6)	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

Auto(S8)	20	24	21		25.1000	33.1000	28.1631

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
31.1996	43.0359	35.6064		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
21.3584	30.0427	24.5522		TC	Turbocharged	SA	Semi-Automatic	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
19.8843	28.2637	22.9455		TC	Turbocharged	SA	Semi-Automatic	8	
21.3584	30.0427	24.5522		TC	Turbocharged	SA	Semi-Automatic	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8	
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8	
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8	
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8	
21.0646	27.9892	23.7037		TC	Turbocharged	SA	Semi-Automatic	8	
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6	
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6	
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8	
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic	8	
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8	
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8	
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8	
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
14.5210	25.1577	17.9329		TC	Turbocharged	SA	Semi-Automatic	8	
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8	

16.7285	23.6581	19.2682	SC	Supercharged	GA	Semi-Automatic	8
22.3665	31.1759	25.6242	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	GA	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	GA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	GA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	GA	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	GA	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	GA	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	GA	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AM	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally Aspirated	AM	Automated Manual- Selectable	7 (e.g. Au
9.7957	16.2453	11.9264	G NA	Naturally Aspirated	AM	Automated Manual- Selectable	7 (e.g. Au
14.0224	20.0427	16.2140	G NA	Naturally Aspirated	AM	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G NA	Naturally A	AM	Automated	7
24.7637	32.6943	27.7980	TC	Turbocharged	GA	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	MA	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
30.6516	40.5292	34.4273	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MA	Manual	6
30.5143	40.5292	34.3319	TC	Turbocharged	MA	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	GA	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
30.3081	39.6674	33.9083	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MA	Manual	6
29.6183	40.1317	33.5766	TC	Turbocharged	MA	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	MA	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	SA	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
25.2640	36.0643	29.1989	TC	Turbocharged	GA	Semi-Automatic	6
25.3353	37.0021	29.5244	TC	Turbocharged	MA	Manual	5
31.1996	43.0359	35.6064	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
30.7888	45.3939	36.0012	TC	Turbocharged	MA	Manual	6
24.6434	32.6158	27.6891	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	MA	Manual	6
25.4066	37.0689	29.5967	TC	Turbocharged	GA	Semi-Automatic	6
25.1926	37.0021	29.4176	TC	Turbocharged	MA	Manual	5
23.5744	31.8670	26.7012	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
31.4045	44.6752	36.2501	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
22.5269	33.6412	26.4608	NA	Naturally Aspirated	SA	Semi-Automatic	6
24.6629	33.9684	28.1307	NA	Naturally Aspirated	MA	Manual	5
30.6516	45.6549	35.9711	TC	Turbocharged	MA	Manual	6
22.8950	32.6159	26.4413	TC	Turbocharged	MA	Manual	6
24.3335	35.7288	28.4112	TC	Turbocharged	GA	Semi-Automatic	6
24.1899	35.2585	28.1693	TC	Turbocharged	MA	Manual	5
29.6183	41.9168	34.1237	TC	Turbocharged	AM	Automated Manual- Selectable	6 (e.g. Au
29.8256	43.5614	34.7575	TC	Turbocharged	MA	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AM	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	GA	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	GA	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	GA	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	SA	Semi-Automatic	8

19.8843	23.7762	21.4655		SC	Supercharg	SA	Semi-Auto	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	EVGAV02t0APA	15			GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02t0VAL		20		DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	EVGAV02t0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02t0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		389	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02t0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV06.3VUM	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02t0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT02.0AUH	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAT03.0NU3		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT03.0ALT	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAJ03.0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	10		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Y	N	A	All Wheel I	FVGAT03.	15	GP	Gasoline (I

Fuel Unit ·	Fuel Unit I	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	miles per gallon		Not exempt			86	12		
MPG	miles per gallon		Not exempt			86	12		
MPG	miles per gallon		Not exempt	79	10				
MPG	miles per gallon		Not exempt	79	10				
MPG	miles per gallon		Not exempt			86	10		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt	84	12				
MPG	miles per gallon		Not exempt	84	12				
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			100	15		
MPG	miles per gallon		Not exempt			100	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			90	28		
MPG	miles per gallon		Not exempt					84	17
MPG	miles per gallon		Not exempt					84	17
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			86	10		
MPG	miles per gallon		Not exempt			90	13		
MPG	miles per gallon		Not exempt			90	13		
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			100	15		

MPG	miles per gallon	Truck							
MPG	miles per gallon	Not exempt	74	13					
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt			101	11			
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	77	11					
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							

MPG miles per gT Truck

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
1550	1550	hwy label value correction							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	manuf confirmatory tests used, 5-cycle un-rounded city value typo corrected	15	22	18				19.5
2200	2200								
2500	2500	eng code correction	14	20	16				17.4
2300	2300	manuf confirmatory tests used, 5-cycle city MPG typo correction	15	22	18				19.5
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350	5-yr fuel cost corrected							
2400	2400	manuf confirmatory tests update	15	21	17				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700	5yr fuel cost corrected							
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator, zero set for 5-yr fuel saved instead of zero for spending							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3150	3150	Relabel, 50/50 weighting of best and worse (D&S) testing							
2200	2200	5yr fuel savings set to zero instead of spending							
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							

3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
3550	3550	Release date change			
4400	4400	corrected carline to Veneno Roadster 477			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1800	1800				
1750	1750				
1550	1550	hwy label value corrected			
1550	1550				
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1750	1750				
1800	1800	fuel consumption and CO2 unadj unrounded corrected			
2100	2100	5 yr fuel savings corrected			
1550	1550	release date change			
2000	2000				
1900	1900				
1550	1550				
2200	2200				
1900	1900	rounded adjusted highway CO2 rounding error corrected			
1900	1900				
1650	1650	EPA confirmatory tests numbers for city highway US06 now included, no label value changes,			
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

2700 2700

Hwy2 Una	Comb2 Ur	City2 Unr	Hwy2 Unr	Cmb2 Unr	Range2 -	Fuel2 Us	Fuel2 Us	Fuel2 Unit	Fuel2 Unit
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	MPG	miles per gallon
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E85)	MPG	miles per gallon
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	MPG	miles per gallon
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E85)	MPG	miles per gallon
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E85)	MPG	miles per gallon

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Fuel2 Ann	City CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
					SIDI;	2	23	Subcompact Cars	
						2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	24	Compact Cars	
2600	400	281	347	2600	SIDI; Under EPA regulations, the manufacturer must use the fu	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompact Cars	
2600	400	281	347	2600	SIDI; Under EPA regulations, the manufacturer must use the fu	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	26	Large Cars	
					SIDI;	2	26	Large Cars	
					SIDI;	2	26	Large Cars	
					SIDI;	2	26	Large Cars	
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Station Wag	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD	
					SIDI;	2	231	Small SUV 4WD	
						2	231	Small SUV 4WD	
					SIDI;	2	231	Small SUV 4WD	
						2	233	Standard SUV 4W	
					SIDI;	2	233	Standard SUV 4W	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI; Under EPA regulations, the manufacturer must use the fu	2	25	Midsize Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	

					SIDI;	2	231	Small SUV 4WD
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seaters
						2	21	Two Seaters
					SIDI & PFI;	2	21	Two Seaters
						2	21	Two Seate
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						1	14	Compact Cars
						1	14	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
						2	25	Midsize Cars
						2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

	SIDI;	2	233	Standard SUV 4W

Car/Truck	Calc Appr	Sales	Release D	EPA FE Label Dataset ID	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	[redacted]	2/25/2014	16011	N	N		
car	Derived 5-cycle label		7/28/2014	16483	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/12/2014	16013	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/12/2014	16012	N	N		
car	Vehicle Specific 5-cycle	[redacted]	1/15/2014	16197	N	N		
car	Derived 5-cycle label		6/9/2014	15670	N	N		
car	Derived 5-cycle label		7/29/2014	16780	N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15675	N	N		
car	Derived 5-cycle label		6/9/2014	16313	N	N		
car	Derived 5-cycle label		7/29/2014	16782	N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15676	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15673	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15674	N	N		
car	Derived 5-cycle label		6/9/2014	16062	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/10/2014	15458	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16061	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/10/2014	15459	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	15647	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	15385	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	15456	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	15648	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	15386	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	16699	N	N		
car	Derived 5-cycle label		6/9/2014	16637	N	N		
car	Derived 5-cycle label		8/4/2014	16057	N	N		
car	Vehicle Specific 5-cycle	[redacted]	8/4/2014	15650	N	N		
	Derived 5-cycle label		6/9/2014	16034	N	N		
	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16700	N	N		
	Vehicle Specific 5-cycle	[redacted]	6/10/2014	15460	N	N		
	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16701	N	N		
	Vehicle Specific 5-cycle	[redacted]	6/12/2014	15408	N	N		
	Derived 5-cycle label		6/9/2014	15711	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15493	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15497	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15601	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15598	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15492	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15496	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15600	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15597	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15589	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	15590	N	N		
car	Vehicle Specific 5-cycle	[redacted]	7/28/2014	16705	N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	[redacted]	8/4/2014	16702	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16064	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16067	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16065	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16068	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/19/2014	16066	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/12/2014	15576	N	N		
car	Vehicle Specific 5-cycle	[redacted]	6/12/2014	15575	N	N		
car	Vehicle Specific 5-cycle	[redacted]	5/15/2014	15400	N	N		

	Vehicle Specific 5-cycle label	6/9/2014	16059	[redacted]	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16014	[redacted]	N	N
car	Vehicle Specific 5-cycle label	1/15/2014	16015	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/1/2014	15737	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15678	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	15681	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/4/2014	16523	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16085	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16169	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16388	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16339	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16086	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16389	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16340	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16492	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16198	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16482	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16533	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	[redacted]	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16429	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16468	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16703	[redacted]	N	N
car	Derived 5-cycle label	8/4/2014	16485	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16450	[redacted]	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16534	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16381	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16393	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16273	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16806	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16283	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N
	Vehicle Specific 5-cycle label	8/15/2014	15417	[redacted]	N	N
	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N

Derived 5-cycle label	9/15/2014	16757	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	CRUA = Audi A3, VW	Y	Golf, Jetta Engine Co	N	de CVCA = VW Passat, Beetle, Beetle C	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	US VARIABLE VALVE TIMING	Audi Valvetronic
N	N	2.0L Engine	N	Code CNTC	Y		CONTINUOU	US VARIABLE VALVE TIMING	Audi Valvetronic
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, wh	en Deactivation of cylinders 2, 3, 5	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8 Deactivation of cylinders 2, 3, 5 and 8 by means of the intake and exhaust camshaft adjusters					
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, wh	en Deactivation of cylinders 2, 3, 5	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CTGA. A8 Deactivation of cylinders 2, 3, 5 and 8 by means of the intake and exhaust camshaft adjusters					
N	N	Engine Code	Y	CTNA with 12 cylinder		Deactivation	of intake and	Exhaust cam timing is electronically con	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	CCTA - Q3 models	Y		CONTINUOU	SLY VARIABLE VALVE TIMING	
N	N	Engine Code	N	: CPMB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUC	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hyb	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y		CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	Engine Code	N	CNDA	Y		CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y		INLET AND	OUTLET CONTINUOUSLY VARIABLE / M	
N	N	Engine Code	N	: CFS	Y		Continuously	intake and exhaust cam adjustment	
N	N	Engine Code	N	: CFS	Y		Continuously	intake and exhaust cam adjustment	
N	N	Engine Code	Y	CRDB (RS7)	Deactivation	of cylinders 2, 3, 5	and 8 by	means of the intake and exhaust	
N	N	Engine Code	N	CYFB - Audi S3	Y		CONTINUOU	SLY VARIABLE VALVE TIMING -	Audi Valvelift System - Exhaust
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	N	: CTUB	Y		CONTINUOU	US VARIABLE VALVE TIMING	AUDI VALVETRONIC SYSTEM
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinders 2, 3, 5	and 8 by	means of the intake and exhaust	
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation	of cylinders 2, 3, 5	and 8 by	means of the intake and exhaust	
N	N	Engine Code	Y	CYCA. 680	Deactivation	of cylinders 2, 3, 5	and 8 by	means of the intake and exhaust	

| | | |

N	N	V6 CYLIN[N	Y	MECANIC,N	Battery(s)

Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
	1	Lithium Ion		266	5.00	37.0	On-Board		

1	NiMH	288	6.00	21.5	On-Board

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
Electrical Regen Brake	Both	Y						1	AC Induction

| | | |

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W40 VW 50501
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
	40			GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW 50700
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	5W/30, VW50400
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	10W60 VW 50101
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W40 VW 50200
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection			N	5W30 VW 50400 /

GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40
GDI	Spark Ignition Direct Injection	N	5W40
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
MFI	Multipoint/s	N	5W30 VW
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

3 PHASE (	34	GDI	Spark IgnitN	N	N	5W40 VW

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S8)	Auto(AM-S8)	VENENO
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Jetta Base
N	No	Manual(M5)	Manual(M5)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

N	No	Auto(S8)	Auto(S8)	Touareg H

| EPA Calcul | MFR Calcu | EPA Calculated Gas G | [redacted] | [redacted] | [redacted]

24.9	[redacted]	4	4 FVGAJ03.0AUD	5
33.3		6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.5LLR	5
14.6		1	1 FVGAV06.5LLR	5
20.0		3	3 FVGAV05.2NLE	5
15.8		1	1 FVGAV06.	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
46.6		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
46.4		8	7 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
45.8		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
45.3		8	7 FVGAV02.0VAL	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
38.9		7	7 FVGAV02.0APA	9
39.3		7	7 FVGAV02.0APA	9
48.3		8	8 FVGAV02.0VAL	5
48.7		8	8 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
39.4		7	7 FVGAV02.0VPD	7
38.4		7	7 FVGAV02.0VPD	7
34.8		7	7 FVGAV02.0VPD	7
49.2		8	8 FVGAV02.0VAL	5
34.9		6	6 FVGAV02.0VUC	5
35.9		7	7 FVGAV02.0VUC	5
48.7		8	8 FVGAV02.0VAL	5
34.0		6	6 FVGAV02.0VPD	7
37.7		7	7 FVGAV02.0VPD	7
37.3		7	7 FVGAV02.0VPD	7
46.2		8	7 FVGAV02.0VAL	5
46.9		8	7 FVGAV02.0VAL	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

28.2	[redacted]	5	5FVGAT03.	5

#2 Smog R	#2 Mfr Sm	#2 EPA Sm	SmartWay	#3 Smog R	#3 Mfr Sm	#3 EPA Sm	SmartWay	#4 Smog R	#4 Mfr Sm

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5

#4 EPA SmSmartWay	$ You Save	$ You Spen	City CO2 R	Hwy CO2 F	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	3250		326	236	285			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		500	415	295	361			
	0		398	277	343			
		1500	446	314	386			
		500	415	295	361			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5750	640	403	534			
		1000	420	317	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2500	496	347	429			
	500		430	328	385			
	0		369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4750	614	355	497			
	0		381	289	340			
		2500	488	321	413			
		3250	519	341	439			
		2500	488	321	413			
		3250	519	341	439			
		2500	500	341	428			
		3250	531	330	441			
		3250	531	330	441			
		3250	534	331	442			

	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	6750	629	441	544
	11000	831	523	692
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
3250		331	224	283
750		358	271	319
750		355	258	311
2250		347	238	298
2000		351	239	301
500		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
3250		332	223	283
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

2500	447	372	413

CO2-City L	CO2-Hwy I	CO2-Comb	CO2-City L	CO2-Hwy I	CO2-Comb	CO2-PHEV	240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5				
247.7	165.1	210.5	325.6	236.3	285.4				
289.0	188.0	243.6	362.1	255.5	314.1				
305.0	200.0	257.8	378.6	280.1	334.3				
294.0	198.0	250.8	366.0	271.0	323.2				
292.0	199.0	250.2	373.7	280.2	331.6				
327.0	210.0	274.4	415.0	295.0	361.0				
321.2	202.4	267.7	398.0	276.6	343.4				
353.0	224.0	295.0	445.7	313.9	386.4				
327.0	210.0	274.4	415.0	295.0	361.0				
321.2	202.4	267.7	398.0	276.6	343.4				
282.0	189.0	240.2	360.0	272.0	320.4				
358.0	219.0	295.4	452.0	306.0	386.3				
383.5	233.0	315.8	481.7	326.0	411.6				
331.0	194.0	269.4	415.7	267.3	348.9				
385.0	236.0	318.0	492.9	320.9	415.6				
331.0	194.0	269.4	415.7	267.3	348.9				
376.5	225.0	308.3	473.4	302.9	396.7				
391.0	224.0	315.9	483.9	299.0	400.7				
339.0	198.0	275.6	425.6	280.1	360.1				
376.5	225.0	308.3	473.4	302.9	396.7				
396.0	226.0	319.5	492.3	309.7	410.1				
515.0	310.0	422.8	640.3	403.3	533.6				
331.0	226.0	283.8	419.7	316.6	373.3				
357.5	223.0	297.0	451.0	312.5	388.7				
357.0	230.0	299.9	445.6	315.7	387.1				
358.0	230.0	300.4	451.6	321.9	393.2				
390.0	251.0	327.4	496.0	347.0	429.0				
348.0	231.0	295.4	430.5	328.5	384.6				
380.0	223.0	309.4	369.0	298.0	337.0				
446.0	260.0	362.3	541.0	369.0	463.6				
458.0	295.0	384.6	569.6	409.5	497.6				
540.6	299.8	432.3	656.3	394.3	538.4				
651.3	362.7	521.4	771.6	439.1	622.0				
577.0	309.4	456.6	685.6	400.2	557.2				
646.3	377.5	525.3	753.1	454.0	618.5				
540.6	299.8	432.3	656.3	394.3	538.4				
651.3	362.7	521.4	771.6	439.1	622.0				
577.0	309.4	456.6	685.6	400.2	557.2				
646.3	377.5	525.3	753.1	454.0	618.5				
466.0	296.0	389.5	562.0	379.0	479.6				
463.0	307.0	392.8	558.0	398.0	486.0				
499.5	269.5	396.0	613.8	354.8	497.3				
311.0	214.0	267.4	381.4	289.2	339.9				
396.0	248.0	329.4	488.0	321.0	412.8				
443.0	266.0	363.4	519.0	341.0	438.9				
396.0	248.0	329.4	488.0	321.0	412.8				
443.0	266.0	363.4	519.0	341.0	438.9				
401.0	256.0	335.8	500.0	341.0	428.4				
427.7	252.5	348.9	530.7	330.5	440.6				
427.7	252.5	348.9	530.7	330.5	440.6				
444.0	243.0	353.6	534.0	330.6	442.5				

427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
708.0	392.0	565.8	831.0	523.0	692.4
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
252.0	156.0	208.8	330.7	224.1	282.7
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3
272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
253.0	155.0	208.9	331.8	222.7	282.7
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

354.0	267.0	314.8	446.9	371.8	413.1

City PHEV	Hwy PHEV	Comb PHE	MDPV?	or Adj Comb	Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
			N	3.7		3.7			
			N	2.8		2.8			
			N	3.6		3.6			
			N	3.8		3.8			
			N	3.7		3.7			
			N	3.7		3.7			
			N	4.0		4.0			
			N	3.8		3.8			
			N	4.3		4.3			
			N	4.0		4.0			
			N	3.8		3.8			
			N	3.6		3.6			
			N	4.3		4.3			
			N	4.5		4.5			
			N	3.4		3.4			
			N	4.8		4.8			
			N	3.4		3.4			
			N	4.5		4.5			
			N	4.5		4.5			
			N	3.6		3.6			
			N	4.5		4.5			
			N	4.5		4.5			
			N	5.9		5.9			
			N	4.2		4.2			
			N	4.3		4.3			
			N	4.3		4.3			
			N	4.3		4.3			
			N	4.8		4.8			
			N	3.7		3.7			
			N	3.8		3.8			
			N	4.5		4.5			
			N	5.6		5.6			
			N	5.9		5.9			
			N	7.1		7.1			
			N	6.2		6.2			
			N	7.1		7.1			
			N	5.9		5.9			
			N	7.1		7.1			
			N	6.2		6.2			
			N	7.1		7.1			
			N	5.6		5.6			
			N	5.6		5.6			
			N	5.6		5.6			
			N	3.8		3.8			
			N	4.8		4.8			
			N	5.0		5.0			
			N	4.8		4.8			
			N	5.0		5.0			
			N	4.8		4.8			
			N	5.0		5.0			
			N	5.0		5.0			
			N	5.0		5.0			

N	5.3	5.3
N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	8.3	8.3
N	6.2	6.2
N	7.7	7.7
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	3.7	3.7
N	4.0	4.0
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.4	3.4
N	3.3	3.3
N	2.8	2.8
N	2.8	2.8
N	3.6	3.6
N	3.6	3.6
N	3.3	3.3
N	3.4	3.4
N	3.7	3.7
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

N	4.8	4.8

EPA_INCR	MFR_EPA	EPA_CALC	EPA_CALC	EPA_RND	EPA_RND	EPA_RND	EPA_RND	EPA_UNRI	EPA_UNRI

EPA_UNR	EPA_UNR	EPA_UNR	EPA_UNR	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	6
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	5
						Mr Richard E Thomas Jr	6
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
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						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	6
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	5
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
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						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

Mr Richard E Thomas Jr

To: Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Ex. 7 Ex. 7 John Juriga (jjuriga@hatci.com)[jjuriga@hatci.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]; Thorsten Wesse (Thorsten.Wesse@afcc-auto.com)[Thorsten.Wesse@afcc-auto.com]; 'andreas.truckenbrodt@truckenbrodts.com'[andreas.truckenbrodt@truckenbrodts.com]
Cc: Tyson Eckerle (tyson.eckerle@gov.ca.gov)[tyson.eckerle@gov.ca.gov]; catherine.kim@daimler.com[catherine.kim@daimler.com]; Kaori Alarid (kaori.alarid@tema.toyota.com)[kaori.alarid@tema.toyota.com]; Ex. 7 Ex. 7 Melanie Hobenshield (melanie.hobenshield@afcc-auto.com)[melanie.hobenshield@afcc-auto.com]; Pat Krayser[pkrayser@aqmd.gov]; Amy Lilly (alilly@hatci.com)[alilly@hatci.com]; Ex. 7 Ex. 7 Bill Elrick[belrick@CAFCP.org]; Bob Cassidy (robert.cassidy@nissan-usa.com)[robert.cassidy@nissan-usa.com]; Brandi Gonzales[bgonzales@CAFCP.org]; Grundler, Christopher[grundler.christopher@epa.gov]; Chris White[cwhite@CAFCP.org]; Dean Kato (dean@intereco.com)[dean@intereco.com]; Ex. 7 Ex. 7 Ex. 7 Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Juergen Friedrich (juergen.friedrich@daimler.com)[juergen.friedrich@daimler.com]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kiho Yoo (k.u@hyundai-motor.com)[k.u@hyundai-motor.com]; Linda Carrizosa[lcarrizosa@cafcp.org]; Lisa Mirisola (lmirisola@aqmd.gov)[lmirisola@aqmd.gov]; Mark S. Torigian Esq (Mtorigian@hatci.com)[Mtorigian@hatci.com]; Matt McClory (matt.mcclory@tema.toyota.com)[matt.mcclory@tema.toyota.com]; Matthew Forrest (matthew.forrest@daimler.com)[matthew.forrest@daimler.com]; Randy Roesser (Randy.Roesser@energy.ca.gov)[Randy.Roesser@energy.ca.gov]; Wysor, Tad[wysor.tad@epa.gov]; Takehito Yokoo (takehito.yokoo@tema.toyota.com)[takehito.yokoo@tema.toyota.com]; Tiger Jeong (tigerjeong@hyundai.com)[tigerjeong@hyundai.com]; Tim Olson (tolson@energy.state.ca.us)[tolson@energy.state.ca.us]; Ex. 7 Ex. 7 Ex. 7 Nancy Ann Leffler (NAL@CHRYSLER.COM)[NAL@CHRYSLER.COM]
From: Linda Carrizosa
Sent: Fri 8/8/2014 11:55:59 PM
Subject: Aug 13 CaFCP (in-person) ST meeting agenda now availalbe
Steering Team Priorities Meeting- Final agenda.pdf

Good Afternoon Steering Team Members,

The agenda and meeting materials for the August 13th CaFCP, in-person, ST meeting are now available on MR and it is located here: http://cafcpmembers.org/membersonly/node/3959.

Your review is requested:

Also located at the above link, please review the one-page document, *"HyPPO Report 2014-2014 Actions"* prior to the meeting next week. We really appreciate your time in preparation for this meeting. Thank you!

RSVP

If you have not already done so, please let me know that you will be attending this meeting.

AGENDA

Please see the attached agenda for your convenience:

Steering Team Meeting - *Strategic Realignment of CaFCP*

August 13th, 2014 - 10:00am to 4:00pm PST

CaFCP Headquarters, 3300 Industrial Blvd., Ste. 1000, West Sacramento, Ca 95691

10:00 - 10:05am	**Welcome**	**Bill E.**
10:05 - 10:20am	**Plan for Today**	**Robert B.**

- Setting the stage

10:20 - 10:45am	**Member Expectations**	**All**

- 2 min overviews of expectations for the day

10:45 - 11:15am	**What's Changed in California**	**ARB, CEC, GO Biz**

- Update on organizational changes, roles and responsibilities

11:15 - 11:45am **Constraints for the Future?** **All**

- Member considerations and other factors going forward

11:45am - 12:15pm **What is CaFCP doing Today?** **Bill**

- Review of 2014 CaFCP program plan and activities

12:15 - 1:00pm **LUNCH**

1:00 - 2:30pm **Priorities and Allocation** **Andreas T.**

- Identify stakeholder priorities using recently published HyPPO report action list*
- Prioritizing CaFCP direction and activities, enabling a 2015 proposal by BKI

2:30 - 2:45pm **BREAK**

2:45 - 3:45pm **Next Steps** **Robert, Andreas**

- Review meeting outcomes and next steps

3:45 - 4:00pm **Closing Comments** **Robert**

Thank you and we look forward to seeing you next week.

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 8/11/2014 12:35:26 PM
Subject: RE: re: 2015 FE Guide - Errors in EPA's data base as of August 1, 2014

Thanks Dave, I corrected index record #106 for the Touareg Hybrid and set the stop/start indicator to yes.

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, August 08, 2014 5:28 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: RE: re: 2015 FE Guide - Errors in EPA's data base as of August 1, 2014

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of August 8, 2014

Attached are the data in Verify as of August 8, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on Aug 15, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

To: Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]
From: Wright, DavidA
Sent: Mon 8/11/2014 2:01:32 PM
Subject: RE: Proposed August Meeting Date for J3066 Task Force

Jenny,

Since most of our J3066 have been winding down around 2:30 and not extending until 3 pm, I plan to move the meeting date to Wednesday from Thursday. Thank you for sharing your availability.

Regards,

David

From: Sigelko, Jenny (EEO) [mailto:Jenny.Sigelko@vw.com]
Sent: Friday, August 08, 2014 8:18 AM
To: Wright, DavidA
Subject: RE: Proposed August Meeting Date for J3066 Task Force

I'm available until about 2:30 on 8/20, and all day 8/21.

Thanks

Jenny

Jenny Sigelko

Volkswagen Group of America

EEO-Auburn Hills MI

248 754 4214

Jenny.Sigelko@VW.com

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Thursday, August 07, 2014 5:49 PM
To: Tommy_Chang@ahm.honda.com; Buller, Patrick; chris.mccarthy@gm.com; sconrad@hatci.com; Tom Beierschmitt (TEMA TTC); mky@chrysler.com; dennis.pawlak@na.mitsubishi-motors.com; douglas.reid@na.mitsubishi-motors.com; Paulina, Carl; Chris Nevers; Glodich, Jeffrey (J.M.); William Beggs; Ryan McGavock; Sigelko, Jenny (EEO); nokawa@mazdausa.com; Duoba, Michael J.; Roxanne Loeffler; Yuhase, Nicole (L.); yosuke_sato@ahm.honda.com; Ellies, Ben; Bowu Reed
Cc: mark.a.theobald@gm.com
Subject: Proposed August Meeting Date for J3066 Task Force

I would like to propose a revision to the meeting date for the August Task Force meeting. I propose the next meeting for the J3066 Task Force take place on Wednesday, August 20 from 1 til 3 pm at the EPA office on Traverwood in Ann Arbor, we had previously discussed meeting on Thursday, August 21. Let me know if Wednesday, August 20th will not work for any Task Force members.

Thanks,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

To: Ex. 6
From: Ball, Joel
Sent: Mon 8/11/2014 8:05:46 PM
Subject: RE: Emissions Warranty

Hello Ex. 6

Thank you for your inquiry regarding the federally required emissions warranty. The Clean Air Act requires manufacturers of light duty vehicles to warranty all emissions related components for 2 years or 24,000 miles and only the specified major emission control components for 8 years or 80,000 miles which ever cove first. The specified major emission control components only include the catalytic converters, the electronic emissions control unit or computer (ECU), and the onboard emissions diagnostic (OBD) device or computer.

The 8 year period begins from the date the vehicle was sold to the first owner (often called the in service date) not the date of production.

The following web page provides more information regarding the federal emissions warranty requirements: www.epa.gov/obd/pubs/420f09048.pdf

I hope this information is helpful.

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
ball.joel@epa.gov

-----Original Message-----
From: LaCroix, John
Sent: Tuesday, July 22, 2014 6:47 AM
To: Ball, Joel
Subject: FW: Emissions Warranty

-----Original Message-----
From: Ex. 6
Sent: Monday, July 21, 2014 2:23 PM
To: LaCroix, John
Cc: Ex. 6
Subject: Emissions Warranty

Hello,

I own a 2006 Audi, A3, production date is March 2006 (8 years and four months old). The mileage on my car is 71,500. I was just informed that my warranty would not be covered. Can you please explain to me why this is the case?

Is there any potential for providing an exception to the four months that exceed the 80k/8 year rule?

I appreciate your timely response.

Best,
Ex. 6

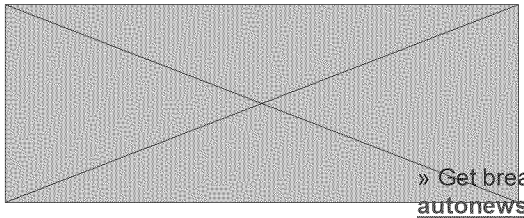
Ex. 6

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/11/2014 8:42:00 PM
Subject: DAILY: Acura launches makeover with big TLX campaign | 2016 Kia Sorento preview | Nissan closing in on Honda in U.S. sales race | Mercedes moves C class up and away from CLA

Today's most read story

A slap in the face of Chrysler suppliers?

August 11, 2014



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TOP NEWS

Acura sees TLX campaign as start of image makeover

UPDATED: 8/11/14 12:05 pm ET
12:01 am U.S. ET | Aug 11

Acura's new TLX sedan takes on the high-wire act of replacing both the TL and TSX in the brand's lineup. But the ad campaign for it largely plays it safe, with heavy buys on TV, live sports, online video and other digital ad media. ... » READ

Kia Sorento to get bigger footprint for 2016

2:47 pm U.S. ET | Aug 11

The next-generation Kia Sorento crossover will be longer, lower and have more interior space than the outgoing version. Kia released the first images of the 2016 Sorento today ahead of an unveiling this month in South Korea. ... » READ

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Could accessories be the new profit center for dealerships? It is one new frontier that may hold the most profit potential dealers have seen since adding the F&I department 40 years ago.

Read the whitepaper

Nissan closes U.S. sales gap with Honda with stylish designs, discounts

12:01 am U.S. ET | Aug 10

Nissan, thanks to the launch of models that are getting high marks for styling, its wider range of vehicles and aggressive discounting, is catching up with Honda. In the next couple of years it could easily pass its rival in U.S. car sales for the first time since 1987. ... » READ

Mercedes moves C class up and away from CLA

12:01 am U.S. ET | Aug 9

The new-generation C-class sedan moves up in price, size and features because it's no longer the entry car into the Mercedes-Benz lineup. ... » READ

Attorneys for GM customers compete to lead ignition-switch legal battle

1:34 pm U.S. ET | Aug 11

Lawyers for GM customers are jostling to lead lawsuits over faulty ignition switches. They don't know what they can sue for -- a judge will tell them that -- but they do want to be in charge. ... » READ

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Toyota cutting the fabled andon cord, symbol of Toyota Way

GM prices '15 mid-sized pickups up to $10,000 below big trucks

Marchionne vows to claw back share of supplier profits

Obama aides let Delphi avoid taxes with 'inversion' tactic now assailed

GM plans to launch more diesel vehicles in U.S.

GM loses bid to dismiss revived ignition-switch lawsuit

UPDATED: 8/9/14 2:50 pm ET - adds professor's comment

12:52 pm U.S. ET | Aug 9

Hacking group wants to play nice with automakers

7:15 pm U.S. ET | Aug 8

GM idling Michigan plant 3 weeks to trim Cadillac ATS, CTS supplies

5:30 pm U.S. ET | Aug 8

Order a burger, get a taste of Ford, all under the blue oval

12:01 am U.S. ET | Aug 9

VW recalls 189,000 Tiguan SUVs in N. America for potential stalling

9:34 am U.S. ET | Aug 9

BMW North America names new CFO

3:40 pm U.S. ET | Aug 11

Venezuelan auto industry in free fall amid economic woes

11:22 pm U.S. ET | Aug 9

Florida dealer opts out of deal to be COO of new company

UPDATED: 8/11/14 2:33 pm ET

1:19 pm U.S. ET | Aug 11

BMW, others lead shake-up of

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For
» Nov. 13-14 - Automobilwoche Kongress
» January 13-14 - Automotive News World Congress
» January 22 - Automotive News Retail Forum

UPCOMING WEBINARS

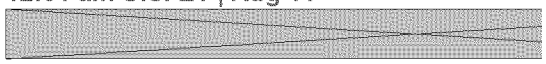
» Aug. 13 - Effective Customer Experiences by SAS
» Sept. 10 - Benchmarking Performance by FirstLook

UPCOMING WEBINARS

» Aug. 20 - Staffing: How to Get Your F&I Office Sized Right

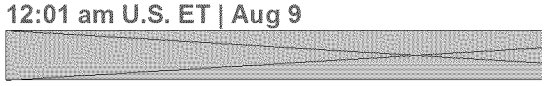
once-closed Korean market

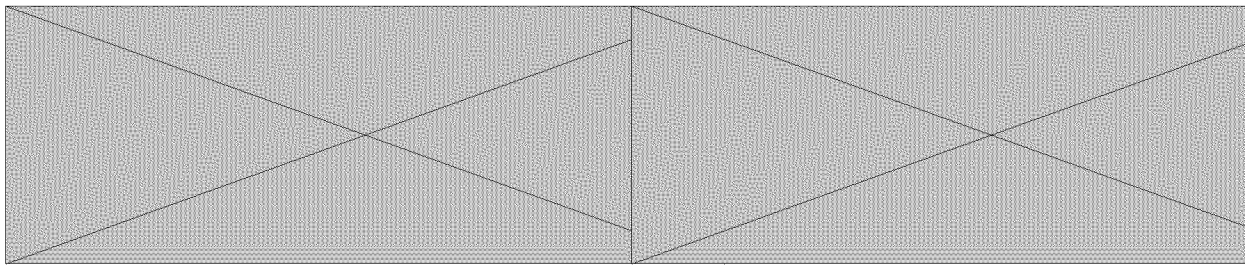
12:01 am U.S. ET | Aug 11



Toyota joins Honda in cutting China prices amid antitrust probe

12:01 am U.S. ET | Aug 9





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. .

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Mazaitis, Vincent
Sent: Tue 8/12/2014 11:56:22 AM
Subject: RE: VW Ex. 4 - CBI

Good morning Bill,

This vehicle has been released.

Thanks,

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, August 12, 2014 7:25 AM
To: Mazaitis, Vincent
Cc: Snyder, Jim; Allen, Gregory (EEO); Giles, Michael (EEO)
Subject: VW Ex. 4 - CBI

Hello Vince,

Please release the Ex. 4 - CBI for pick up. We hope to have it transported back to Auburn Hills in the next day or so.

Regards,

Bill Rodgers

VWGoA EEO

(248) 754-4219

To: Henrietta.Dandy@dot.gov[Henrietta.Dandy@dot.gov]
From: Good, David
Sent: Tue 8/12/2014 9:50:56 PM
Subject: RE: There are some CAFE/GHG reports in the queue for signing

Henrietta,

They were done last week and should be in the NHTSA mailbox.

Dave

From: Henrietta.Dandy@dot.gov [mailto:Henrietta.Dandy@dot.gov]
Sent: Tuesday, August 12, 2014 3:33 PM
To: Good, David
Subject: RE: There are some CAFE/GHG reports in the queue for signing

Dave,

What is the status of the pending reports (Telsa and VWs)?

Thanks,

Henrietta

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, August 06, 2014 6:18 PM
To: Wehrly, Linc
Cc: Thompson, Harry (NHTSA); Dandy, Henrietta (NHTSA)
Subject: There are some CAFE/GHG reports in the queue for signing

Linc,

There should be Tesla, 2 Porsches (GHG only) and 2 VW's---if I can finish them tonight.

Harry, These should be signed Thursday. The 2013 VW CAFEs include Porsche. Please disregard the separate Porsche GHG calculations---as they are only for EPA---but are sent electronically to your mailbox with all the CAFE calculations & letters.

Dave

To: Good, David[good.david@epa.gov]
From: Henrietta.Dandy@dot.gov
Sent: Tue 8/12/2014 9:51:57 PM
Subject: RE: There are some CAFE/GHG reports in the queue for signing

Thanks!

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, August 12, 2014 5:51 PM
To: Dandy, Henrietta (NHTSA)
Subject: RE: There are some CAFE/GHG reports in the queue for signing

Henrietta,

They were done last week and should be in the NHTSA mailbox.

Dave

From: Henrietta.Dandy@dot.gov [mailto:Henrietta.Dandy@dot.gov]
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Sent: Wednesday, August 06, 2014 6:18 PM
To: Wehrly, Linc
Cc: Thompson, Harry (NHTSA); Dandy, Henrietta (NHTSA)
Subject: There are some CAFE/GHG reports in the queue for signing

Linc,

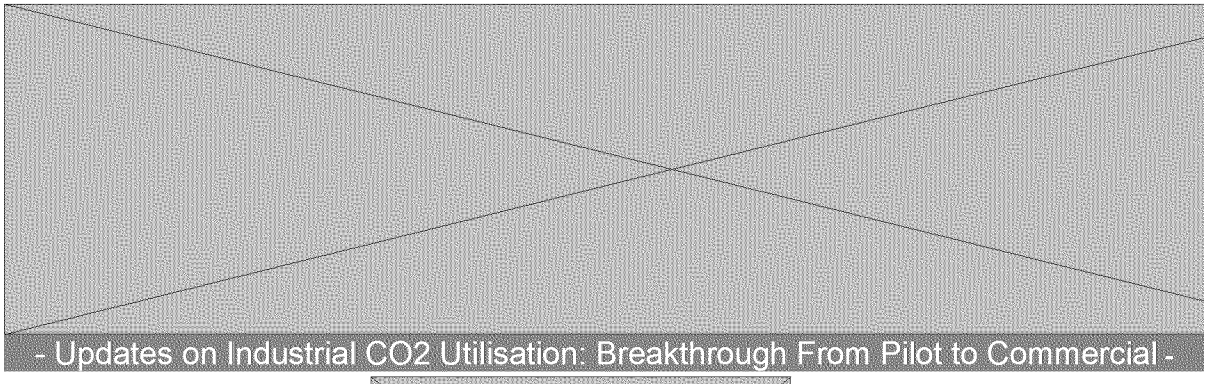
There should be Tesla, 2 Porsches (GHG only) and 2 VW's---if I can finish them tonight.

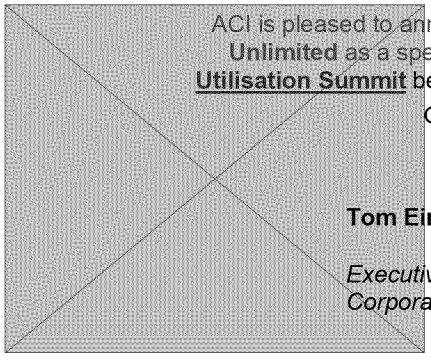
Harry, These should be signed Thursday. The 2013 VW CAFEs include Porsche. Please disregard the separate Porsche GHG calculations---as they are only for EPA---but are sent electronically to your mailbox with all the CAFE calculations & letters.

Dave

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: 3rd Carbon Dioxide Utilisation Summit
Sent: Wed 8/13/2014 8:43:10 AM
Subject: Joule Unlimited Executive VP confirms presentation

Share





ACI is pleased to announce **Tom Einar Jensen**, **Joule Unlimited** as a speaker at the **3rd Carbon Dioxide Utilisation Summit** being held in Bremen on 22nd & 23rd October 2014.

Tom Einar Jensen,

Executive Vice President and Head of Corporate Development,

Take advantag of the 10% Early Bird discount and save £150 on your registratio fee!

***Only valid before 22nd**

Tom will be giving a presentation on **"Converting a Global CO2 Problem into a Global Fuel Solution" touching on key areas including:**

- The impact: enabling Co2 neutral fuels in the near term
- How it works: a solar process to reverse combustion in real time
- The opportunity: leveraging waste streams to create a circular economy model

August*

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To confirm your participatio contact: Rohan Baryah on:







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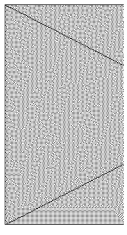
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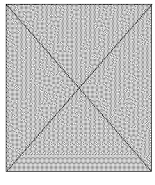
Rohan Baryah

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Joule Unlimited

Exclusive Site Visit:

Audi E-Gas Plant: the world's first power-to-gas plant built on an industrial scale to produce synthetic natural gas, using waste CO2.

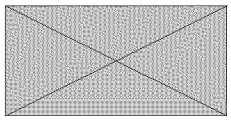
There is no extra charge to attend the site visit, but spaces are limited and allocated on a first come first served basis. Please register your attendance for the site visit when booking for the **3rd Carbon Dioxide Utilisation Summit**.

Places are strictly limited (Last 2 spaces remaining!!)

Book now to secure your space!

Conference Programme:

To download a copy of the latest programme, click the button below >



Confirmed Speakers Include:

- **Dr Hermann Pengg**, *Head of Renewable Fuels*, **Audi AG**
- **Carl Berninghausen**, *CEO*, **Sunfire GmbH**
- **Lothar Mennicken**, *Senior Scientific Officer*, **BMBF**
- **Dr Elías Rodríguez Martín**, *Head of Chemical Technical Services, Fossil Generation*, **Iberdrola**
- **Peter Radgen**, *Head of Innovation Center Carbon Capture & Storage*, **E.ON**
- **Tom Jensen**, *Executive VP & Head of Corporate Development*, **Joule Unlimited**
- **Stephan Rieke**, *CCO - Head of Sales*, **ETOGAS**
- **Prof. Gerard van Rooij**, *Principal Scientist*, **FOM Institute DIFFER**
- **Michele Aresta**, **CIRCC**

Frank Rogalla, *Innovation and Technology Manager*, **FCC Aqualia**

- **Giorgio Dodero**, *Chairman*, **IPG**
- **Ed Rode**, *Principal Researcher*, **DNV GL**
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To: Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7 @vw.com]; Ex. 7 Ex. 7 @vw.com]
From: Thomas, Richard (EEO)
Sent: Wed 8/13/2014 12:22:53 PM
Subject: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Hi Dave;

Per the EPA August 5th guidance letter CD-14-16 we are providing information for a place holder in the printed version of the 2015 fuel economy guide for the Volkswagen "e-Golf", battery electric vehicle. This model falls in the Compact class and equipped with an 85 kW AC Permanent Magnet Synchronous Motor and Lithium-Ion battery.

If you need anything else to secure its mention in the printed guide please contact me directly.

Best regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax:

mailto: Ex. 7

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Wed 8/13/2014 7:06:08 PM
Subject: Test data for Ex. 7 Ex. 7

Hi, Tobias.

Test data for the above vehicle is attached. Please let me know if you have any questions.

Regards,

Lynn Sohacki

Environmental Engineer

Compliance Division

EPA

734-214-4851

To: Wright, DavidA[Wright.DavidA@epa.gov]
Cc: yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]
From: Tommy_Chang@ahm.honda.com
Sent: Thur 8/14/2014 12:56:59 PM
Subject: Re: Proposed August Meeting Date for J3066 Task Force

Hello David,

Non-Responsive

From: "Wright, DavidA" <Wright.DavidA@epa.gov>
To: "Tommy_Chang@ahm.honda.com" <Tommy_Chang@ahm.honda.com>, "Buller, Patrick" <patrick.buller@volvocars.com>, "chris.mccarthy@gm.com" <chris.mccarthy@gm.com>, "sconrad@hatci.com" <sconrad@hatci.com>, "Tom Beierschmitt (TEMA TTC)" <tom.beierschmitt@tema.toyota.com>, "mky@chrysler.com" <mky@chrysler.com>, "dennis.pawlak@na.mitsubishi-motors.com" <dennis.pawlak@na.mitsubishi-motors.com>, "douglas.reid@na.mitsubishi-motors.com" <douglas.reid@na.mitsubishi-motors.com>, "Paulina, Carl" <paulina.carl@epa.gov>, Chris Nevers <CNevers@autoalliance.org>, "Glodich, Jeffrey (J.M.)" <jglodich@ford.com>, William Beggs <william.beggs@gm.com>, Ryan McGavock <DRM202@chrysler.com>, "Sigelko, Jenny (EEO)" <Jenny.Sigelko@vw.com>, "nokawa@mazdausa.com" <nokawa@mazdausa.com>, "Duoba, Michael J." <mduoba@anl.gov>, Roxanne Loeffler <rloeffler@sae.org>, "Yuhase, Nicole (L.)" <nyuhase@ford.com>, "yosuke_sato@ahm.honda.com" <yosuke_sato@ahm.honda.com>, "Ellies, Ben" <ellies.ben@epa.gov>, Bowu Reed <bowu.reed@na.mitsubishi-motors.com>,
Cc: "mark.a.theobald@gm.com" <mark.a.theobald@gm.com>
Date: 08/07/2014 05:49 PM
Subject: Proposed August Meeting Date for J3066 Task Force

I would like to propose a revision to the meeting date for the August Task Force meeting. I propose the next meeting for the J3066 Task Force take place on Wednesday, August 20 from 1 til 3 pm at the EPA office on Traverwood in Ann Arbor, we had previously discussed meeting on Thursday, August 21. Let me know if Wednesday, August 20th will not work for any Task Force members.

Thanks,

David

David A. Wright
Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory
Phone: (734) 214-4467
E-mail: wright.davida@epa.gov

Non-Responsive

From: "Wright, DavidA" <Wright.DavidA@epa.gov>
To: "Tommy_Chang@ahm.honda.com" <Tommy_Chang@ahm.honda.com>, "Buller, Patrick" <patrick.buller@volvocars.com>, "chris.mccarthy@gm.com" <chris.mccarthy@gm.com>, "sconrad@hatci.com" <sconrad@hatci.com>, "Tom Beierschmitt (TEMA TTC)" <tom.beierschmitt@tema.toyota.com>, "mky@chrysler.com" <mky@chrysler.com>, "dennis.pawlak@na.mitsubishi-motors.com" <dennis.pawlak@na.mitsubishi-motors.com>, "douglas.reid@na.mitsubishi-motors.com" <douglas.reid@na.mitsubishi-motors.com>, "Paulina, Carl" <paulina.carl@epa.gov>, Chris Nevers <CNevers@autoalliance.org>, "Glodich, Jeffrey (J.M.)" <jglodich@ford.com>, William Beggs <william.beggs@gm.com>, Ryan McGavock <DRM202@chrysler.com>, "Sigelko, Jenny (EEO)" <Jenny.Sigelko@vw.com>, "nokawa@mazdausa.com" <nokawa@mazdausa.com>, "Duoba, Michael J." <mduoba@anl.gov>, Roxanne Loeffler <rloeffler@sae.org>, "Yuhase, Nicole (L.)" <nyuhase@ford.com>, "yosuke_sato@ahm.honda.com" <yosuke_sato@ahm.honda.com>, "Ellies, Ben" <ellies.ben@epa.gov>, Bowu Reed <bowu.reed@na.mitsubishi-motors.com>,
Cc: "mark.a.theobald@gm.com" <mark.a.theobald@gm.com>
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Thanks,

David

David A. Wright
Light-Duty Vehicle Center, Compliance Division National Vehicle and Fuel Emissions Laboratory
Phone: (734) 214-4467
E-mail: wright.davida@epa.gov

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Thur 8/14/2014 2:50:07 PM
Subject: test data for T132-0125

Ex. 7

Hi, Tobias

Test data for the above vehicle is attached. Please let me know if you have any questions.

Regards,

Lynn Sohacki

Environmental Engineer

Compliance Division

EPA

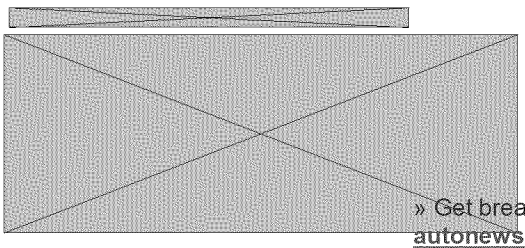
734-214-4851

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/14/2014 8:38:44 PM
Subject: DAILY: GM to invest $2.8 billion in Brazil over five years | Pope bestows halo on Kia's Soul | China to fine Audi $40 million for breaking monopoly law

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UPDATED: 8/14/14 3:16 pm ET - adds details
12:15 pm U.S. ET | Aug 14

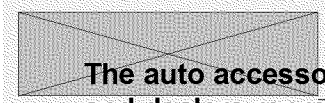
General Motors will invest 6.5 billion reais ($2.8 billion) in Brazil over the next five years, CEO Mary Barra said today. She said GM remains committed to one of its most important markets. ... » READ

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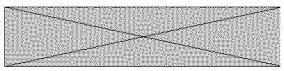


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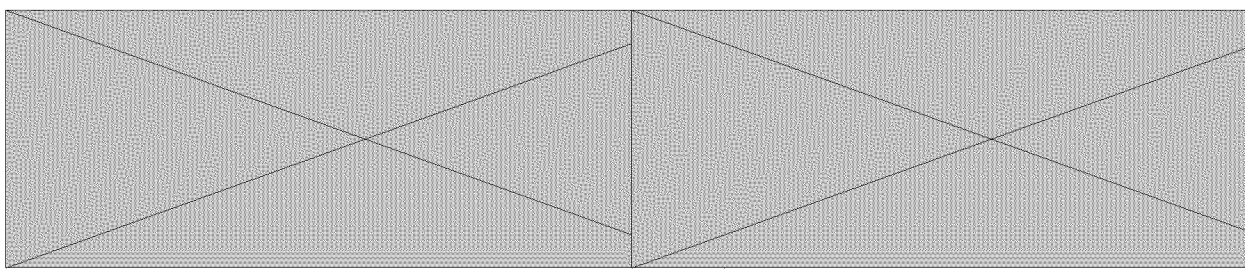


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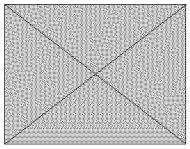
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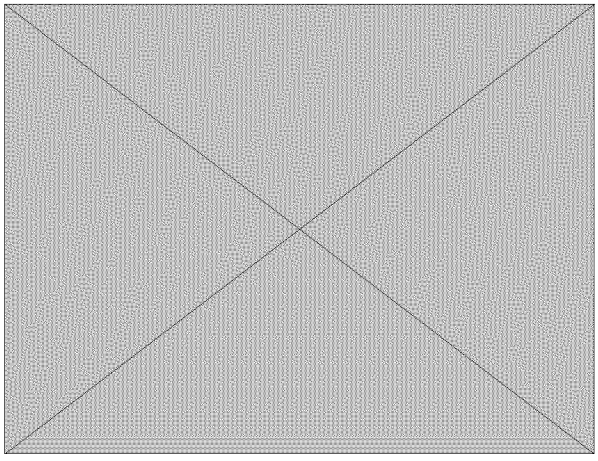
. .

To: Bunker, Byron[bunker.byron@epa.gov]
From: James Sherman - SAE International
Sent: Fri 8/15/2014 12:05:31 AM
Subject: Updates From CARB and OEMs at Upcoming OBD Event

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SAE 2014 On-Board Diagnostics Symposium

September 9-11, 2014
Wyndham Anaheim
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Anaheim, California, USA

Time is running out to register for the SAE 2014 On-Board Diagnostics Symposium. This year's event will host technical speakers from CARB and major OEMs such as Chrysler, Ford, GM, Toyota, and VW who will address the most pressing OBD technology topics, and provide

Event Quick Links:

updates on the latest standards and regulatory information.

"This is the only industry event that I know of where you can network with the decision-makers and the developers of vehicle on-board diagnostics."

-Kathy Kedzior of Mahle Powertrain LLC

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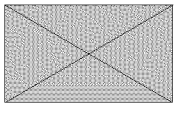
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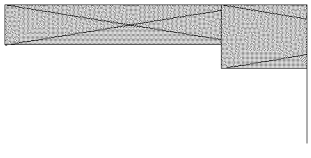
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Take advantage of your time in Anaheim – register for this OBD Professional Development Seminar held the day prior to the Symposium and save 10% on the event registration fee.

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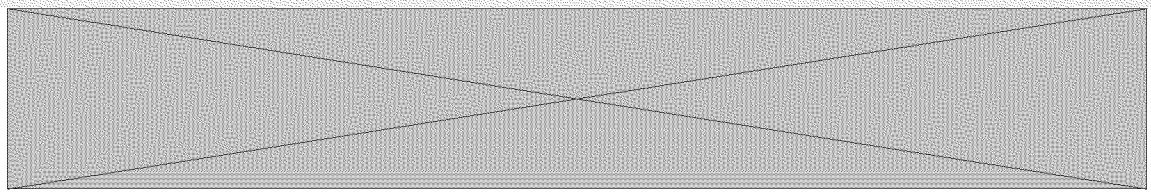
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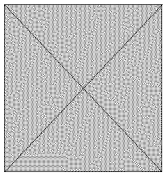
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Fri 8/15/2014 4:06:49 PM
Subject: Green Car Report Daily Headlines

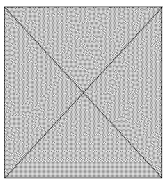
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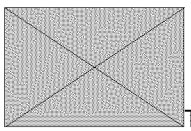
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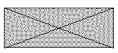
Hydrogen Costs, Hybrid Garbage Truck, Cadillac ELR Realism: Today's Car News

Aug 15, 2014 03:28 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today's news is all about realism. A study estimates the cost of making hydrogen competitive with gasoline, a GM executive puts the Cadillac ELR in perspective, and a hybrid garbage truck reminds us that not just passenger cars produce greenhouse-gas emissions. All this and more on Green Car Reports. A new ad for the Smart Fortwo Electric Drive...

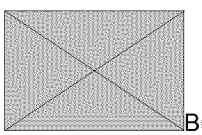
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Ford HQ To Have Michigan's Largest Solar Array, 30 Charging Stations Included

Aug 15, 2014 03:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

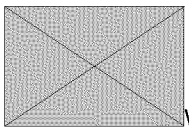
 Building electric cars and plug-in hybrids is great, but what if there's no place to charge them? Ford is starting a project that will not only give employees a place to charge, but also reduce its corporate carbon emissions. The carmaker announced it is teaming with Detroit utility DTE Energy to build a solar canopy over

hundreds of parking...

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To Get Hydrogen Competitive With Gasoline: $1 Billion, Cheap Natural Gas Needed

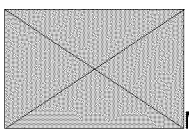
Aug 15, 2014 02:56 pm | feedback@highgearmedia.com (John Voelcker)

 While battery-electric and plug-in hybrid cars have had much of the spotlight to themselves for the past four years, we're going to be hearing a lot more about hydrogen fuel-cell cars over the next few. And a new study just released by the University of California--Davis suggests that we are "tantalizingly close to the beginning of a hydrogen...

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Cadillac ELR Not A Tesla Competitor, GM Exec Acknowledges

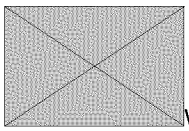
Aug 15, 2014 02:06 pm | feedback@highgearmedia.com (John Voelcker)

 Mark Reuss, the head of global product development for General Motors, has acknowledged that GM may not have a vehicle that competes directly with the Tesla Model S electric luxury sedan. Speaking yesterday at a business breakfast associated with the weekend's Dream Cruise event in Detroit, Reuss called Tesla “completely serious competitor...

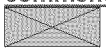
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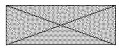
Hybrid Garbage Truck Now On Sale In U.S.: Saving Fuel While Hauling Trash

Aug 15, 2014 01:00 pm | feedback@highgearmedia.com (Antony Ingram)

 We can buy a hybrid or electric vehicles and cover the roof of our homes in solar panels, but when it comes to other aspects of our daily lives a fossil-fuel reducing lifestyle is often a the whim of local governments or private businesses. One we often forget about, at least until they wake you one morning with the clanking of trash cans, is...

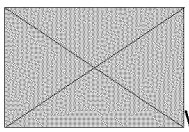
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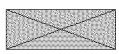
Smart Electric Drive Ad: Where Winning Drag Races Really Counts

Aug 15, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 Whatever you think of the diminutive city cars produced by Daimler's Smart brand, the company certainly has a talent for marketing. The latest ad from Smart Canada has the same sort of self-deprecating humor that Volkswagen used for years when advertising its Beetle--another rear-engined small car loved and hated in equal measure. The Smart Fortwo...

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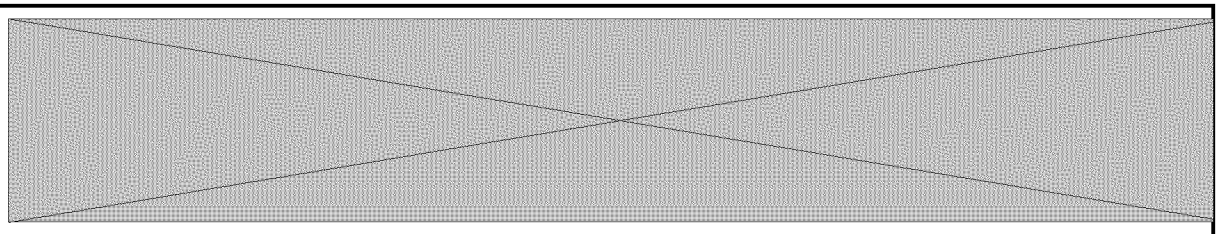
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- **EPA Says Industry Ahead of CAFE Curve -** The auto industry is working faster than expected and introducing new technologies that had not been forseen by government regulators. **READ MORE**

- **My Column: Why 707 HP is Not Enough**
  When Chrysler Group recently unveiled the new 707-hp supercharged Hellcat V-8, I have to admit my first reaction was like Bud Fox in the 1987 classic "Wall Street," when he realizes there are no limits to Gordon Gekko's greed. **READ MORE**

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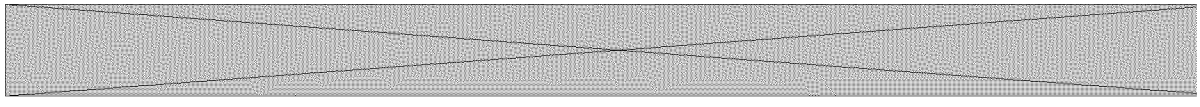
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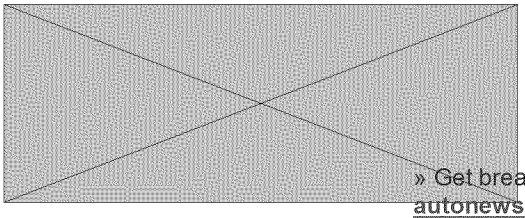
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/15/2014 8:37:30 PM
Subject: DAILY: Ford recalls 2013 Escape for 11th time | Startup Renovo unveils $529,000 EV supercar | Are Aston Martin's U.S. stores at risk? | Kia joins Bentley in wooing the 1% crowd at Pebble Beach

Today's most read story

Ford, Chevy dangle new deals as U.S. sales, share lag

August 15, 2014



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TOP NEWS

Ford recalls 2013 Escape for 11th time, this time for wiring problem

3:43 pm U.S. ET | Aug 15

Ford has issued its 11th recall on the 2013 Escape crossover, this time because a wiring problem could cause the engine to hesitate or stall. The recall covers 159,395 Escapes and Focus ST hatchbacks from the 2013 and 2014 model years with turbocharged 2.0-liter engines in North America. ... » READ

Startup Renovo unveils $529,000 EV supercar after years of secrecy

UPDATED: 8/15/14 11:30 am ET -- adds link, details

11:00 am U.S. ET | Aug 15

When they started their company four years ago, the founders of the Silicon Valley startup Renovo Motors saw a hole in the market for a pure electric supercar. Today they revealed their first product: the $529,000 Renovo Coupe, scheduled to launch in the United States next year. ... » READ

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Aston Martin's U.S. stores at risk due to new crash rule, dealer says

4:45 am U.S. ET | Aug 15

Aston Martin stores in the United States will become unprofitable and could be forced to close if the sports-car maker cannot get an exemption for two of its models from tougher new crash standards, a top dealer said. ... » READ

Ford, Chevy dangle new deals as U.S. sales, share lag

5:15 pm U.S. ET | Aug 14

Ford and Chevrolet are getting a jump-start on summer clearance deals to spur sluggish U.S. sales and stem market-share losses. The two top-selling brands in the United States have launched Labor Day and summer promotions offering 0 percent financing for 72 months across wide swaths of their lineups. ... » READ

Kia joins Bentley in wooing the 1% crowd at Pebble Beach

2:34 pm U.S. ET | Aug 15

The number of automotive brands making an appearance at the classic-car events in Pebble Beach, California, this week reflects the increasing number of automakers fighting for a piece of the luxury new-vehicle market. ... » READ

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11:21 am U.S. ET | Aug 15

GM exec confirms plans for top-range Cadillac sedan, redesigned SRX

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Jobs growth slows at Japanese auto plants in U.S.

12:25 pm U.S. ET | Aug 15

Smartphone camera makers see next opportunity in cars

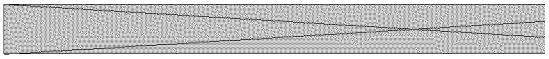
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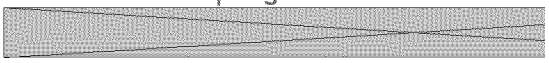
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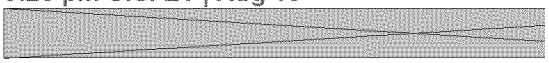
Mercedes, Audi gain on BMW in global luxury sales race

12:01 am U.S. ET | Aug 15



Chevy renews Dream Cruise sponsorship for 3 more years

3:28 pm U.S. ET | Aug 15



Autoliv ups focus on fast-growing active safety business

12:01 am U.S. ET | Aug 15

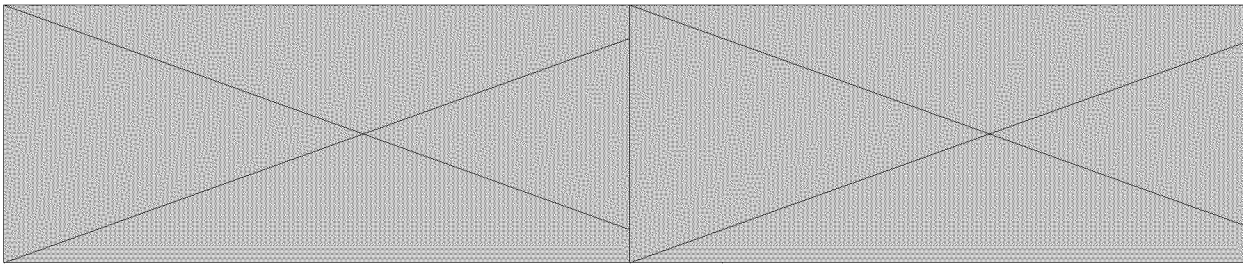


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From: Linda Carrizosa
Sent: Sat 8/16/2014 1:42:11 AM
Subject: Update to CaFCP EB and ST Meetings for October 2014

Good Afternoon Everyone,

There was a proposal to move the EB/ST meetings from the currently scheduled dates of Oct 21 (EB) and Oct 22 (ST) to the following week, **Oct 28 (EB) and Oct 29 (ST),** so we are making plans to hold the EB/ST meetings on **Oct 28th and 29th**. Please make us aware if you see any major problems with these new dates.

The meeting outlook invite will be updated shortly to reflect the new dates for EB and ST Meetings, so please plan on the following:

1. **Oct 28, 2014** - Executive Board – Location: TBD: Sacramento, CA

2. **Oct 29, 2014** - Steering Team – Location: CaFCP, West Sacramento, CA

Thank you and please let me know if you have any questions.

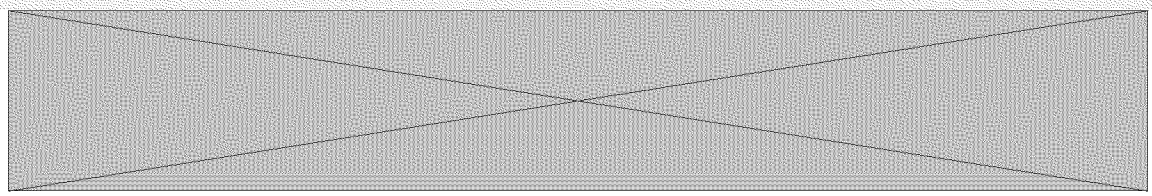
Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

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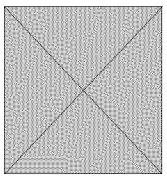
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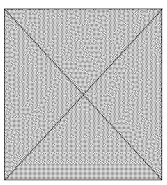
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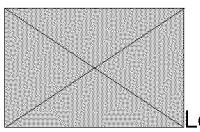
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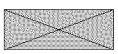
Accord Hybrid Supply, GM 200-Mile Electric Car, Tesla Motor Warranty: Today's Car News

Aug 18, 2014 03:36 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Lots of Honda news today. The 2014 Accord Hybrid is still in short supply, and the Japanese carmaker is planning an efficient 1.0-liter gasoline engine. We've also got stories on Tesla's expanded drivetrain warranty, and the delivery of the first 2015 BMW i8 plug-in hybrids. All this and more on Green Car Reports. From electric boats to "rolling...

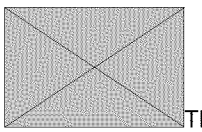
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GM's 200-Mile Electric Car For 2017: What We Know So Far

Aug 18, 2014 03:33 pm | feedback@highgearmedia.com (John Voelcker)

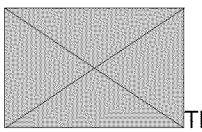
 The arrival of a moderately-priced battery electric car with a rated range of 200 miles will change the entire market for plug-in vehicles. When that will happen, and from which maker, remains open--though the likely suspects are Nissan, Tesla, and General Motors, with

BMW as a long-shot outsider. With GM's then-CEO Dan Akerson having referred to...

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Audi Patent Reveals Plan For Four-Cylinder Engine As Smooth As Six Or V-8

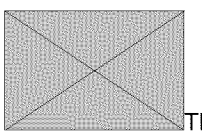
Aug 18, 2014 02:11 pm | feedback@highgearmedia.com (Antony Ingram)

 There's a reason people like big, multi-cylinder engines and it isn't just about the noise they make or how much power they produce. It's also to do with smoothness. And it's one reason some people are worried about the latest trend for downsized four-cylinder units, as they begin appearing in larger vehicles. If Audi's next generation...

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2014 Honda Accord Hybrid Still In Very Short Supply: Why?

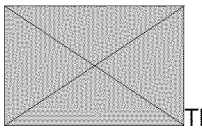
Aug 18, 2014 12:58 pm | feedback@highgearmedia.com (John Voelcker)

 The 2014 Honda Accord Hybrid received very positive reviews when it was launched almost a year ago. Its EPA fuel-efficiency rating of 47 mpg combined approaches that of the 50-mpg Toyota Prius, but the Accord is a more conventional looking mid-size sedan--a plus for many buyers. Yet sales have been remarkably low, and potential buyers routinely...

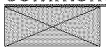
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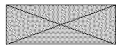
First BMW i8 Plug-In Hybrid Sport Coupes Delivered At Pebble Beach Concours

Aug 18, 2014 12:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 The annual Pebble Beach Concours d'Elegance is perhaps the premiere classic car event in the country. Lately, it's become a place for manufacturers to preview their newest and most exclusive new models. With hundreds of rare and expensive cars on display, this celebration of high-dollar automotive history may not seem like the place to show off a...

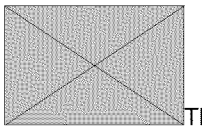
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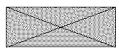
Could Honda's Future 1.0-Liter Be World's Most Efficient Engine?

Aug 18, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 The last time Honda made a 1.0-liter gasoline engine, it broke new records for fuel efficiency. Found under the hood of the original Insight hybrid, it still has the highest gas mileage of any EPA-rated non-plugin. It also took International Engine of the Year in 2000, and won that competition's sub-1-liter class seven times. That's a high bar to...

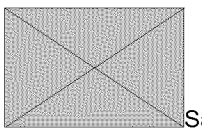
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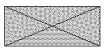
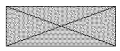


Saleen FourSixteen Is Modified Tesla Model S: Full Details

Aug 18, 2014 11:00 am | feedback@highgearmedia.com (Antony Ingram)

 Saleen used the 2014 Pebble Beach Concours d'Elegance to unveil its take on the Tesla Model S electric sedan, the FourSixteen. More familiar to fans of high-performance gasoline-fueled road cars, Saleen has gone green with its latest modified vehicle, a car company boss Steve Saleen describes as "an entirely new class of American automobile."...

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Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Mon 8/18/2014 4:31:40 PM
Subject: re: 2015 FE Guide - Errors in EPA's data base as of August 15, 2014
VW_Group_2015 FEGuide-all rel dates-no-sales-8-15-2014.xlsx

Richard,

re: 2015 FE Guide - Errors in EPA's data base as of August 15, 2014

FYI----there were no errors.

Attached are the data in Verify as of August 8, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred. [Note that the method our macro uses for calculating voluntarily increased CO2 values is outlined in section 10.1 of CD-13-11---(if the macro flagged any errors in voluntarily increased CO2 values).]

The next normal posting of 2015 FE Label data will be on Aug 22, 2014 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). All errors must be corrected by August 26th (at the very latest) in order for the vehicle to be listed in the 2015 Printed Guide, ref EPA Guidance letter CD-14-15.

Please make any needed corrections to Verify as soon as possible.

Thanks

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl	
		2015 Volkswagen	Audi Group of	A3	VGA 7	1.8	4	
Diesel;		2015 Volkswagen	Audi Group of	A3	VGA 101	2.0	4	
		2015 Volkswagen	Audi Group of	A3 Cabriolet	VGA 6	1.8	4	
		2015 Volkswagen	Audi Group of	A3 Cabriolet quattro	VGA 5	2.0	4	
		2015 Volkswagen	Audi Group of	A3 quattro	VGA 4	2.0	4	
		2015 Volkswagen	Audi Group of	A4	VGA 46	2.0	4	
Relabeled.	Please include in	2015 Volkswagen	Audi Group of	A4 quattro	VGA 64	2.0	4	the reason and regulations for relabeling (if not already pro
		2015 Volkswagen	Audi Group of	A4 quattro	VGA 49	2.0	4	
		2015 Volkswagen	Audi Group of	A5 Cabriolet quattro	VGA 66	2.0	4	
Relabeled.	Please include in	2015 Volkswagen	Audi Group of	A5 quattro	VGA 65	2.0	4	the reason and regulations for relabeling (if not already pro
		2015 Volkswagen	Audi Group of	A5 quattro	VGA 50	2.0	4	
		2015 Volkswagen	Audi Group of	A6	VGA 47	2.0	4	
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 48	2.0	4	
		2015 Volkswagen	Audi Group of	A6 quattro	VGA 72	3.0	6	
Diesel;		2015 Volkswagen	Audi Group of	A6 quattro	VGA 17	3.0	6	
		2015 Volkswagen	Audi Group of	A7 quattro	VGA 71	3.0	6	
Diesel;		2015 Volkswagen	Audi Group of	A7 quattro	VGA 18	3.0	6	
		2015 Volkswagen	Audi Group of	A8	VGA 40	3.0	6	
		2015 Volkswagen	Audi Group of	A8	VGA 11	4.0	8	
Diesel;		2015 Volkswagen	Audi Group of	A8L	VGA 15	3.0	6	
		2015 Volkswagen	Audi Group of	A8L	VGA 41	3.0	6	
		2015 Volkswagen	Audi Group of	A8L	VGA 10	4.0	8	
		2015 Volkswagen	Audi Group of	A8L	VGA 14	6.3	12	
		2015 Volkswagen	Audi Group of	allroad quattro	VGA 68	2.0	4	
		2015 Volkswagen	Audi Group of	Q3	VGA 62	2.0	4	
		2015 Volkswagen	Audi Group of	Q3 quattro	VGA 37	2.0	4	
		2015 Volkswagen	Audi Group of	Q5	VGA 67	2.0	4	
		2015 Volkswagen	Audi Group of	Q5	VGA 70	3.0	6	
Diesel;		2015 Volkswagen	Audi Group of	Q5	VGA 16	3.0	6	
Hybrid;		2015 Volkswagen	Audi Group of	Q5 Hybrid	VGA 63	2.0	4	
Diesel;		2015 Volkswagen	Audi Group of	Q7	VGA 12	3.0	6	
		2015 Volkswagen	Audi Group of	Q7	VGA 51	3.0	6	
		2015 Volkswagen	Audi Group of	R8	VGA 27	4.2	8	
		2015 Volkswagen	Audi Group of	R8	VGA 29	4.2	8	
		2015 Volkswagen	Audi Group of	R8	VGA 35	5.2	10	
		2015 Volkswagen	Audi Group of	R8	VGA 33	5.2	10	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 26	4.2	8	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 28	4.2	8	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 34	5.2	10	
		2015 Volkswagen	Audi Group of	R8 Spyder	VGA 32	5.2	10	
		2015 Volkswagen	Audi Group of	RS5	VGA 30	4.2	8	
		2015 Volkswagen	Audi Group of	RS5 Cabriolet	VGA 31	4.2	8	
Relabeled.	Please include in	2015 Volkswagen	Audi Group of	RS7	VGA 21	4.0	8	the reason and regulations for relabeling (if not already pro
		2015 Volkswagen	Audi Group of	S3	VGA 42	2.0	4	
		2015 Volkswagen	Audi Group of	S4	VGA 73	3.0	6	
		2015 Volkswagen	Audi Group of	S4	VGA 76	3.0	6	
		2015 Volkswagen	Audi Group of	S5	VGA 74	3.0	6	
		2015 Volkswagen	Audi Group of	S5	VGA 77	3.0	6	
		2015 Volkswagen	Audi Group of	S5 Cabriolet	VGA 75	3.0	6	
		2015 Volkswagen	Audi Group of	S6	VGA 20	4.0	8	
		2015 Volkswagen	Audi Group of	S7	VGA 19	4.0	8	
		2015 Volkswagen	Audi Group of	S8	VGA 9	4.0	8	

	2015	Volkswagen Group of	SQ5	VGA	69	3.0	6
	2015	Volkswagen Group of	TT Coupe quattro	VGA	2	2.0	4
	2015	Volkswagen Group of	TT Roadster quattro	VGA	3	2.0	4
	2015	Volkswagen Group of	Continental GT	VGA	24	4.0	8
	2015	Volkswagen Group of	Continental GT	VGA	43	6.0	12
	2015	Volkswagen Group of	Continental GT Convertible	VGA	22	4.0	8
	2015	Volkswagen Group of	Continental GT Convertible	VGA	45	6.0	12
	2015	Volkswagen Group of	Flying Spur	VGA	23	4.0	8
	2015	Volkswagen Group of	Flying Spur	VGA	44	6.0	12
	2015	Volkswagen Group of	Mulsanne	VGA	61	6.8	8
	2015	Volkswagen Group of	Veyron	VGA	60	8.0	16
	2015	Volkswagen Group of	Aventador Coupe	VGA	52	6.5	12
	2015	Volkswagen Group of	Aventador Roadster	VGA	53	6.5	12
	2015	Volkswagen Group of	Huracan	VGA	25	5.2	10
	2015	Volkswagen Lamborghini	Veneno Roadster	VGA	54	6.5	12
	2015	Volkswagen Volkswagen	Beetle	VGA	79	1.8	4
	2015	Volkswagen Volkswagen	Beetle	VGA	78	1.8	4
	2015	Volkswagen Volkswagen	Beetle	VGA	81	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	95	2.0	4
	2015	Volkswagen Volkswagen	Beetle	VGA	83	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle	VGA	91	2.0	4
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	80	1.8	4
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	82	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	96	2.0	4
	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	84	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Beetle Convertible	VGA	92	2.0	4
	2015	Volkswagen Volkswagen	CC	VGA	58	2.0	4
	2015	Volkswagen Volkswagen	CC	VGA	59	2.0	4
	2015	Volkswagen Volkswagen	CC 4Motion	VGA	56	3.6	6
	2015	Volkswagen Volkswagen	Eos	VGA	36	2.0	4
	2015	Volkswagen Volkswagen	Golf	VGA	103	1.8	4
	2015	Volkswagen Volkswagen	Golf	VGA	85	1.8	4
Diesel;	2015	Volkswagen Volkswagen	Golf	VGA	100	2.0	4
Diesel; Relabeled. Please include in knowledge base and field the reason and regulations for relabeling (if not alrea	2015	Volkswagen Volkswagen	Golf	VGA	104	2.0	4
	2015	Volkswagen Volkswagen	GTI	VGA	1	2.0	4
	2015	Volkswagen Volkswagen	GTI	VGA	8	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	98	1.8	4
	2015	Volkswagen Volkswagen	Jetta	VGA	97	1.8	4
	2015	Volkswagen Volkswagen	Jetta	VGA	93	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	102	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	99	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	86	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Jetta	VGA	105	2.0	4
	2015	Volkswagen Volkswagen	Jetta	VGA	94	2.0	4
	2015	Volkswagen Volkswagen	Passat	VGA	90	1.8	4
	2015	Volkswagen Volkswagen	Passat	VGA	88	1.8	4
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	89	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Passat	VGA	87	2.0	4
	2015	Volkswagen Volkswagen	Passat	VGA	55	3.6	6
	2015	Volkswagen Volkswagen	Tiguan	VGA	39	2.0	4
	2015	Volkswagen Volkswagen	Tiguan 4Motion	VGA	38	2.0	4
Diesel;	2015	Volkswagen Volkswagen	Touareg	VGA	13	3.0	6
	2015	Volkswagen Volkswagen	Touareg	VGA	57	3.6	6

Hybrid;	2015 Volkswagen Touareg Hybrid	VGH	106	3.0	6

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S6)	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S6)	31	43	36				41.0359	61.6186	48.2955
Auto(AM-S6)	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S6)	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S6)	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S8)	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M6)	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S8)	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.7000	39.2000	31.1732
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	14	23	17				16.4549	29.7195	20.5904
Manual(M6)	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S7)	13	22	16				15.4000	28.8067	19.4796
Manual(M6)	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S7)	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S7)	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	15	25	18				17.8763	33.1799	22.5584
Auto(AM-S6)	23	31	26				28.5000	41.5000	33.1767
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	28	21				22.4000	35.8000	26.9372
Manual(M6)	17	26	20				20.0000	33.4000	24.4063
Auto(AM-S7)	18	26	21				22.1000	34.7000	26.4165
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(AM-S7)	17	27	20				20.7366	35.2072	25.4423
Auto(S8)	17	27	20				19.9000	36.4000	24.9995

Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S6)	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S7)	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S7)	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S7)	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S7)	14	20	16	16.8000	25.5000	19.8471
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M5)	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S6)	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S6)	31	41	34	40.2000	57.8000	46.5830
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S6)	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S6)	30	40	34	39.7000	56.5000	45.8327
Manual(M6)	23	31	26	27.7589	43.4112	33.1352
Manual(M6)	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S6)	22	31	25	26.9290	42.1849	32.1632
Manual(M6)	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S6)	22	30	25	27.5000	41.5000	32.4219
Auto(S6)	25	36	29	32.5000	51.1000	38.8661
Manual(M5)	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S6)	31	43	36	41.0359	61.6186	48.2955
Manual(M6)	30	45	36	39.9000	64.5000	48.1668
Auto(AM-S6)	25	33	28	30.7000	45.3000	35.9078
Manual(M6)	25	34	28	30.0000	46.4000	35.6740
Auto(S6)	25	37	30	32.7401	52.6000	39.4414
Manual(M5)	25	37	29	32.3787	52.4790	39.1216
Auto(AM-S6)	24	32	27	29.5595	44.4600	34.8093
Auto(AM-S6)	31	45	36	41.3000	64.1000	49.1703
Auto(S6)	23	34	26	28.7000	47.5000	34.9193
Manual(M5)	25	34	28	29.3000	49.6000	35.9145
Manual(M6)	31	46	36	40.2000	65.6000	48.6823
Manual(M6)	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M5)	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S6)	30	42	34	38.7000	59.9000	46.0312
Manual(M6)	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S6)	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612

Auto(S8)	20	24	21		25.1000	33.1000	28.1631

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
31.1996	43.0359	35.6064		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.3444	34.5845	28.0867		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.3120	31.5429	26.4136		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
24.0818	32.6198	27.2970		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
23.6858	31.6788	26.7189		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
21.3584	30.0427	24.5522		TC	Turbocharged	SA	Semi-Automatic	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
19.8843	28.2637	22.9455		TC	Turbocharged	SA	Semi-Automatic	8	
21.3584	30.0427	24.5522		TC	Turbocharged	SA	Semi-Automatic	8	
22.1972	32.0693	25.7665		TC	Turbocharged	M	Manual	6	
24.5044	32.5529	27.5721		TC	Turbocharged	SCV	Selectable Continuously Variable	8	(e.g. C
19.6106	28.8603	22.9156		TC	Turbocharged	SA	Semi-Automatic	8	
18.3949	27.2332	21.5408		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.0028	27.5267	21.3226		SC	Supercharged	SA	Semi-Automatic	8	
24.4094	38.0485	29.1042		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
18.2315	29.5343	22.0244		TC	Turbocharged	SA	Semi-Automatic	8	
23.8727	36.3252	28.2271		TC	Turbocharged	SA	Semi-Automatic	8	
18.6853	29.3211	22.3303		SC	Supercharged	SA	Semi-Automatic	8	
17.9485	28.5015	21.5369		TC	Turbocharged	SA	Semi-Automatic	8	
13.8358	21.9706	16.6020	G	NA	Naturally Aspirated	SA	Semi-Automatic	8	
21.0646	27.9892	23.7037		TC	Turbocharged	SA	Semi-Automatic	8	
19.6619	28.5380	22.8617		TC	Turbocharged	SA	Semi-Automatic	6	
19.7028	28.0105	22.7375		TC	Turbocharged	SA	Semi-Automatic	6	
19.6619	27.5771	22.5781		TC	Turbocharged	SA	Semi-Automatic	8	
17.8443	25.5746	20.6536		SC	Supercharged	SA	Semi-Automatic	8	
23.6266	31.3636	26.5783		TC	Turbocharged	SA	Semi-Automatic	8	
24.0075	29.7936	26.3065		TC	Turbocharged	SA	Semi-Automatic	8	
18.7400	27.6200	21.9099		TC	Turbocharged	SA	Semi-Automatic	8	
15.5983	21.6157	17.8322		SC	Supercharged	SA	Semi-Automatic	8	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
13.5631	22.5823	16.5348	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.4565	20.0560	14.1955	G	NA	Naturally Aspirated	M	Manual	6	
12.9942	22.2057	15.9766	G	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
11.7338	19.4192	14.2763	G	NA	Naturally Aspirated	M	Manual	6	
15.7409	23.3075	18.4339		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
15.8793	22.1836	18.2078		NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7	(e.g. Au
14.5210	25.1577	17.9329		TC	Turbocharged	SA	Semi-Automatic	8	
23.1833	30.7065	26.0560		TC	Turbocharged	AMS	Automated Manual- Selectable	6	(e.g. Au
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
18.1170	27.5580	21.4190		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
17.0438	26.0230	20.1767		SC	Supercharged	M	Manual	6	
17.6699	25.9530	20.6333		SC	Supercharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.7533	26.9042	20.1794		TC	Turbocharged	AMS	Automated Manual- Selectable	7	(e.g. Au
16.5369	26.7008	19.9551		TC	Turbocharged	SA	Semi-Automatic	8	

16.7285	23.6581	19.2682	SC	Supercharged	SAM	Semi-Automatic	8
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.3665	31.1759	25.6242	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
15.2087	25.3816	18.5553	TC	Turbocharged	SAM	Semi-Automatic	8
12.4737	21.0866	15.2827	G TC	Turbocharged	SAM	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SAM	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SAM	Semi-Automatic	8
13.8190	23.8488	17.0447	G TC	Turbocharged	SAM	Semi-Automatic	8
12.0228	20.0478	14.6643	G TC	Turbocharged	SAM	Semi-Automatic	8
10.5402	17.7129	12.8889	G TC	Turbocharged	SAM	Semi-Automatic	8
8.4232	14.7698	10.4424	G TC	Turbocharged	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6055	18.4729	13.1199	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
9.7957	16.2453	11.9264	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
14.0224	20.0427	16.2140	G NA	Naturally Aspirated	AMS	Automated Manual- Selectable	7 (e.g. Au
10.6353	16.9743	12.7836	G NA	Naturally Aspirated	AMS	Automated	7
24.7637	32.6943	27.7980	TC	Turbocharged	SAM	Semi-Automatic	6
23.7579	32.6943	27.0899	TC	Turbocharged	MM	Manual	5
23.6856	29.5929	26.0232	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.6516	40.5292	34.4273	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MM	Manual	6
30.5143	40.5292	34.3319	TC	Turbocharged	MM	Manual	6
23.9740	32.2876	27.1159	TC	Turbocharged	SAM	Semi-Automatic	6
22.7135	28.5529	25.0157	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.3081	39.6674	33.9083	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.6980	30.6082	25.6850	TC	Turbocharged	MM	Manual	6
29.6183	40.1317	33.5766	TC	Turbocharged	MM	Manual	6
21.8993	30.8310	25.1821	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
20.6665	31.8238	24.5378	TC	Turbocharged	MM	Manual	6
16.9415	25.2190	19.8774	NA	Naturally Aspirated	SAM	Semi-Automatic	6
21.7634	30.1121	24.8658	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
25.2640	36.0643	29.1989	TC	Turbocharged	SAM	Semi-Automatic	6
25.3353	37.0021	29.5244	TC	Turbocharged	MM	Manual	5
31.1996	43.0359	35.6064	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
30.4456	44.9367	35.6137	TC	Turbocharged	MM	Manual	6
24.6434	32.6158	27.6891	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
24.9095	34.2917	28.4070	TC	Turbocharged	MM	Manual	6
25.4066	37.0689	29.5967	TC	Turbocharged	SAM	Semi-Automatic	6
25.1926	37.0021	29.4176	TC	Turbocharged	MM	Manual	5
23.5744	31.8670	26.7012	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
31.4045	44.6752	36.2501	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
22.5269	33.6412	26.4608	NA	Naturally Aspirated	SAM	Semi-Automatic	6
24.6629	33.9684	28.1307	NA	Naturally Aspirated	MM	Manual	5
30.6516	45.6549	35.9711	TC	Turbocharged	MM	Manual	6
22.8950	32.6159	26.4413	TC	Turbocharged	MM	Manual	6
24.3335	35.7288	28.4112	TC	Turbocharged	SAM	Semi-Automatic	6
24.1899	35.2585	28.1693	TC	Turbocharged	MM	Manual	5
29.6183	41.9168	34.1237	TC	Turbocharged	AMS	Automated Manual- Selectable	6 (e.g. Au
29.8256	43.5614	34.7575	TC	Turbocharged	MM	Manual	6
19.7174	27.8048	22.6868	NA	Naturally Aspirated	AMS	Automated Manual- Selectable	6 (e.g. Au
20.5496	25.7855	22.6161	TC	Turbocharged	SAM	Semi-Automatic	6
20.3807	25.8019	22.5089	TC	Turbocharged	SAM	Semi-Automatic	6
19.6490	28.9961	22.9829	TC	Turbocharged	SAM	Semi-Automatic	8
17.0411	22.7325	19.2048	NA	Naturally Aspirated	SAM	Semi-Automatic	8

19.8843	23.7762	21.4655	SC	Supercharged	GA	Semi-Automatic	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0VAL		20		DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0APA	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		389	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		422	GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAV03.0AUE	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV06.3VUM	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		406	GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ02.0AUF	85		455	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0NU4		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT02.0AUH	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAT03.0NU3		5		DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	EVGAT03.0ALT	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV04.2NLC	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAV05.2NLD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.2NLB	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV02.0AUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
N	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAJ03.0AUD	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium
Y	N	A	All Wheel Drive	EVGAV04.0NUA	15			GP	Gasoline (Premium

Y	N	A	All Wheel Drive	FVGAJ03.0AUD	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV02.0AUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV04.0NUA	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.0VLN	85	357	GP	Gasoline (Premium
Y	N	R	2-Wheel Drive, Rear	FVGAV06.8ELP	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV08.0GLB	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.5LLR	15		GPR	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV05.2NLE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV06.	15		GPR	Gasoline (I
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAV03.6VUF	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VSE	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
N	N	F	2-Wheel Drive, Front	FVGAV02.0APA	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	10		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VUC	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
N	N	F	2-Wheel Drive, Front	FVGAV02.0VBD	15		G	Gasoline (Regular
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
N	N	F	2-Wheel Drive, Front	FVGAV02.0VAL		20	DU	Diesel, ultra low s
Y	N	F	2-Wheel Drive, Front	FVGAV03.6VUG	15		GP	Gasoline (Premium
Y	N	F	2-Wheel Drive, Front	FVGAV02.0VUE	10		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAJ02.0VUE	15		GP	Gasoline (Premium
Y	N	A	All Wheel Drive	FVGAT03.0NU2		5	DU	Diesel, ultra low s
Y	N	A	All Wheel Drive	FVGAT03.6VUK	15		GP	Gasoline (Premium

Y	N	A	All Wheel Drive	3VWGAT03.0VUH	15		GP	Gasoline (Premium

Fuel Unit	Fuel Unit I	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	miles per gallon		Not exempt			86	12		
MPG	miles per gallon		Not exempt			86	12		
MPG	miles per gallon		Not exempt	79	10				
MPG	miles per gallon		Not exempt	79	10				
MPG	miles per gallon		Not exempt			86	10		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt			91	12		
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt	84	12				
MPG	miles per gallon		Not exempt	84	12				
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			100	15		
MPG	miles per gallon		Not exempt			100	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			107	15		
MPG	miles per gallon		Not exempt			90	28		
MPG	miles per gallon		Not exempt					84	17
MPG	miles per gallon		Not exempt					84	17
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Truck						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt						
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			86	10		
MPG	miles per gallon		Not exempt			90	13		
MPG	miles per gallon		Not exempt			90	13		
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	84	13				
MPG	miles per gallon		Not exempt	81	10				
MPG	miles per gallon		Not exempt			98	16		
MPG	miles per gallon		Not exempt					94	25
MPG	miles per gallon		Not exempt			100	15		

MPG	miles per gallon	Truck							
MPG	miles per gallon	Not exempt	74	13					
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	89	11					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	86	7					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt	102	13					
MPG	miles per gallon	Not exempt			101	11			
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gallon	Not exempt							
MPG	miles per gN	Not exempt							
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt					85	15	
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	81	7					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	94	13					
MPG	miles per gallon	Not exempt	77	11					
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt					93	16	
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			94	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Not exempt			102	16			
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							
MPG	miles per gallon	Truck							

MPG miles per gallon Truck

Annual Fu	EPA Calcu	Comment	City2 FE (U	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
1550	1550	hwy label value correction							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	manuf confirmatory tests used, 5-cycle un-rounded city value typo corrected	15	22	18				19.5
2200	2200								
2500	2500	eng code correction	14	20	16				17.4
2300	2300	manuf confirmatory tests used, 5-cycle city MPG typo correction	15	22	18				19.5
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350	5-yr fuel cost corrected							
2400	2400	manuf confirmatory tests update	15	21	17				19.2
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16				17.4
2700	2700	5yr fuel cost corrected							
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator, zero set for 5-yr fuel saved instead of zero for spending							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3150	3150	Relabel, 50/50 weighting of best and worse (D&S) testing							
2200	2200	5yr fuel savings set to zero instead of spending							
2700	2700								
2850	2850								
2700	2700								
2850	2850								
2700	2700								
2850	2850	maximum ethanol corrected							
2850	2850	maximum ethanol corrected							
2850	2850	S/S indicator to yes, back to NO.							

3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
3550	3550	Release date change			
4400	4400	corrected carline to Veneno Roadster 477			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1800	1800				
1750	1750				
1550	1550	hwy label value corrected			
1550	1550	relabel with EPA confirmatory tests			
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1750	1750				
1800	1800	fuel consumption and CO2 unadj unrounded corrected			
2100	2100	5 yr fuel savings corrected			
1550	1550	release date change			
2000	2000				
1900	1900				
1550	1550				
2200	2200				
1900	1900	rounded adjusted highway CO2 rounding error corrected			
1900	1900				
1650	1650	EPA confirmatory tests numbers for city highway US06 now included, no label value changes,			
1600	1600	corrected CO2 values and annual fuel cost corrected			
2500	2500				
2500	2500				
2500	2500				
2450	2450	corrected fuel economy rating to 5			
3000	3000				

2700	2700 S/S set to yes

Hwy2 Una	Comb2 Ur	City2 Unr	Hwy2 Unr	Cmb2 Unr	Range2 -	Fuel2 Us	Fuel2 Us	Fuel2 Unit	Fuel2 Unit
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	MPG	miles per gallon
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E85)	MPG	miles per gallon
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E85)	MPG	miles per gallon
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E85)	MPG	miles per gallon
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E85)	MPG	miles per gallon

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E85)	MPG	miles per gallon

Fuel2 Ann	City CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
					SIDI;	2	23	Subcompact Cars	
						2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	24	Compact Cars	
2600	400	281	347	2600	SIDI; Under EPA regulations, the manufacturer is the fu	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompact Cars	
2600	400	281	347	2600	SIDI; Under EPA regulations, the manufacturer is the fu	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
						2	26	Large Cars	
					SIDI;	2	26	Large Cars	
					SIDI;	2	26	Large Cars	
					SIDI;	2	26	Large Cars	
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Station Wag	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD	
					SIDI;	2	231	Small SUV 4WD	
						2	231	Small SUV 4WD	
					SIDI;	2	231	Small SUV 4WD	
						2	233	Standard SUV 4W	
					SIDI;	2	233	Standard SUV 4W	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	21	Two Seaters	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI; Under EPA regulations, the manufacturer is the fu	2	25	Midsize Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	24	Compact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	23	Subcompact Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	
					SIDI;	2	25	Midsize Cars	

					SIDI;	2	231	Small SUV 4WD
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	21	Two Seaters
					SIDI;	2	24	Compact Cars
4250	711	410	576	4250	FFV;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
4250	726	421	589	4250	FFV;	2	23	Subcompact Cars
					SIDI;	2	25	Midsize Cars
4250	726	421	589	4250	FFV;	2	25	Midsize Cars
						1	15	Midsize Cars
						2	21	Two Seaters
						2	21	Two Seaters
						2	21	Two Seaters
					SIDI & PFI;	2	21	Two Seaters
						2	21	Two Seate
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	23	Subcompact Cars
						2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	23	Subcompact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
					Under EPA regulations, the manufacturer revised the Carl eco			
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	24	Compact Cars
						2	24	Compact Cars
						1	14	Compact Cars
						1	14	Compact Cars
						2	24	Compact Cars
					SIDI;	2	24	Compact Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
						2	25	Midsize Cars
						2	25	Midsize Cars
					SIDI;	2	25	Midsize Cars
					SIDI;	2	230	Small SUV 2WD
					SIDI;	2	231	Small SUV 4WD
						2	233	Standard SUV 4W
					SIDI;	2	233	Standard SUV 4W

SIDI;	2	233	Standard SUV 4W

Car/Truck	Calc Appr	Sales	Release D	EPA FE Label Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	2/25/2014	16011	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16483		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	16013		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	16012		N	N		
car	Vehicle Specific 5-cycle	1/15/2014	16197		N	N		
car	Derived 5-cycle label	6/9/2014	15670		N	N		
car	Derived 5-cycle label	7/29/2014	16780		N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	6/19/2014	15675		N	N		
car	Derived 5-cycle label	6/9/2014	16313		N	N		
car	Derived 5-cycle label	7/29/2014	16782		N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	6/19/2014	15676		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15673		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15674		N	N		
car	Derived 5-cycle label	6/9/2014	16062		N	N		
car	Vehicle Specific 5-cycle	6/10/2014	15458		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	16061		N	N		
car	Vehicle Specific 5-cycle	6/10/2014	15459		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15647		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15385		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15456		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15648		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15386		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	16699		N	N		
car	Derived 5-cycle label	6/9/2014	16637		N	N		
car	Derived 5-cycle label	8/4/2014	16057		N	N		
car	Vehicle Specific 5-cycle	8/4/2014	15650		N	N		
	Derived 5-cycle label	6/9/2014	16034		N	N		
	Vehicle Specific 5-cycle	6/19/2014	16700		N	N		
	Vehicle Specific 5-cycle	6/10/2014	15460		N	N		
	Vehicle Specific 5-cycle	6/19/2014	16701		N	N		
	Vehicle Specific 5-cycle	6/12/2014	15408		N	N		
	Derived 5-cycle label	6/9/2014	15711		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15493		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15497		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15601		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15598		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15492		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15496		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15600		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15597		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15589		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	15590		N	N		
car	Vehicle Specific 5-cycle	7/28/2014	16705		N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle	8/4/2014	16702		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	16064		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	16067		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	16065		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	16068		N	N		
car	Vehicle Specific 5-cycle	6/19/2014	16066		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	15576		N	N		
car	Vehicle Specific 5-cycle	6/12/2014	15575		N	N		
car	Vehicle Specific 5-cycle	5/15/2014	15400		N	N		

	Vehicle Specific 5-cycle label	6/9/2014	16059	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	1/15/2014	16014	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	1/15/2014	16015	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	3/28/2014	15558	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/15/2014	15654	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	3/28/2014	15557	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/15/2014	15661	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	3/28/2014	15559	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/15/2014	15659	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/1/2014	15737	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/23/2014	15692	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/4/2014	15678	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/4/2014	15681	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/12/2014	15599	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/4/2014	16523	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16085	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16169	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/28/2014	16170	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16388	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/28/2014	16092	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16339	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16086	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/28/2014	16088	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16389	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/28/2014	16093	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16340	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/14/2014	15689	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/14/2014	15690	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/14/2014	15687	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/14/2014	15602	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16492	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16198	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16482	[redacted]	N	N		
car	Derived 5-cycle label	8/8/2014	16832	[redacted]	N	Y	RL	Relabel - label val
car	Vehicle Specific 5-cycle label	4/1/2014	15293	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	4/1/2014	15313	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16429	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16468	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/28/2014	16703	[redacted]	N	N		
car	Derived 5-cycle label	8/4/2014	16485	[redacted]	N	N		
car	Derived 5-cycle label	8/25/2014	16450	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	8/25/2014	16222	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16534	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	7/28/2014	16381	[redacted]	N	N		
car	Derived 5-cycle label	7/14/2014	16393	[redacted]	N	N		
car	Derived 5-cycle label	7/14/2014	16273	[redacted]	N	N		
car	Derived 5-cycle label	7/14/2014	16806	[redacted]	N	N		
car	Derived 5-cycle label	7/28/2014	16283	[redacted]	N	N		
car	Vehicle Specific 5-cycle label	5/26/2014	15686	[redacted]	N	N		
	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N		
	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N		
	Vehicle Specific 5-cycle label	8/15/2014	15417	[redacted]	N	N		
	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N		

Derived 5-cycle label	9/15/2014	16838	[redacted]	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	Engine Code	N	CRUA = Audi A3, VW	Y	Golf, Jetta Engine Co	N	de CVCA = VW Passat, Beetle, Beetle C	
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOU	US VARIABLE VALVE TIMING	
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CTUA	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		N		N		
N	N	Engine Code	N	: CTUA	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, Variable	Valve Timing	
N	N	Engine Code	Y	CTGA. A8 Activation	Deactivation of	cylinders 2, 3, 5,	and 8 by	means of the inlet and exhaust cam	
N	N		N		N		N		
N	N	Engine Code	N	: CREC Equipped with	Y	Start Stop Tech	nology, Variable	Valve Timing	
N	N	Engine Code	Y	CTGA. A8 Activation	Deactivation of	cylinders 2, 3, 5,	and 8 by	means of the inlet and exhaust cam	
N	N	Engine Code	Y	CTNA with 12 cylinder	Deactivation	intake and	Exhaust cam timing is electronically con		
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUOU	SLY VARIABLE VALVE TIMING		
N	N	Engine Code	N	CCTA - Q3 models	Y	CONTINUOU	SLY VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CPMB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CTUC	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N		N		N		N		
N	N	Engine Code	N	(CHJA) Audi Q5 Hybrid	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine code	N	CNRB	N		N		
N	N	Engine Code	N	(CTWB)	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST		
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST		
N	N	Engine Code	N	CNDA	Y	CONTINUOU	US INTAKE AND EXHAUST CAM ADJUST		
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	ENGINE CO	DE	CTYA (AUDI R8)	Y	INLET AND	OUTLET CONTINUOUSLY VARIABLE / M		
N	N	Engine Code	N	: CFS	Y	Continuously	intake and exhaust cam adjustment		
N	N	Engine Code	N	: CFS	Y	Continuously	intake and exhaust cam adjustment		
N	N	Engine Code	Y	CRDB (RS7)	Deactivation of	cylinders 2, 3, 5,	and 8 by	means of the inlet and exhaust cam	
N	N	Engine Code	N	CYFB - Audi S3	Y	CONTINUOU	SLY VARIABLE	Valve System -	Exhaust
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	N	: CTUB	Y	CONTINUOU	US VARIABLE VALVE TIMING		
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation of	cylinders 2, 3, 5,	and 8 by	means of the inlet and exhaust cam	
N	N	Engine Code	Y	CEUC. S6/S7	Deactivation of	cylinders 2, 3, 5,	and 8 by	means of the inlet and exhaust cam	
N	N	Engine Code	Y	CYCA. 68	Deactivation of	cylinders 2, 3, 5,	and 8 by	means of the inlet and exhaust cam	

N	N	Engine Code	N	: CTUA	Y	CONTINUOUS VARIABLE VALVE TIMING			
N	N	Generation	N	1 (EVO) 2.0L TFSI with	Y	Audi Valvelift System	CONTINUOUSLY VARIABLE VALVE TIMING		
N	N	Generation	N	1 (EVO) 2.0L TFSI with	Y	Audi Valvelift System	CONTINUOUSLY VARIABLE VALVE TIMING		
N	N	Engine Code	Y	CYCA. 6[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	N	CVAB. Bentley Continental GT / Continental GTC	Y	[illegible]	CONTINUOUSLY VARIABLE / M		
N	N	Engine Code	Y	CYCA. 6[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	N	CVAB. Bentley Continental GT / Continental GTC	Y	[illegible]	CONTINUOUSLY VARIABLE / M		
N	N	Engine Code	Y	CYCA. 6[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	N	CVAB. Bentley Continental GT / Continental GTC	Y	[illegible]	CONTINUOUSLY VARIABLE / M		
N	N		Y	Cylinder deactivation	Y	Variable number of cylinders firing			
N	N	Engine Code	N	(CBXA). CHARGE AIR	Y	COOLER (INTERCOOLER)			
N	N	Engine Code	Y	L539B (Aventador LP	Y	[illegible]	[illegible]	[illegible]	[illegible]
N	N	Engine Code	Y	L539B (Aventador LP	Y	[illegible]	[illegible]	[illegible]	[illegible]
N	N	ENGINE CODE	CSJA (Lamborghini	Huracan / Huracan Spyder	Y	[illegible]	CONTINUOUS VARIABLE / M		
N	N	Engine Co	Y	ELECTRO	Y	HYDRAULI	N		
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N		N		Y	position of intake/exhaust camshaft electronically			
N	N		N		Y	position of intake/exhaust camshaft electronically			
N	N		N		Y	position of intake/exhaust camshaft electronically			
N	N		N		Y	CONTINUOUS VARIABLE VALVE TIMING			
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOUS VARIABLE VALVE TIMING		
N	N	1.8L Engine	N	Code CNSB, CXBB //	Y	CNSA, CXBA	CONTINUOUS VARIABLE VALVE TIMING		
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOUS VARIABLE VALVE TIMING			
N	N	2.0L Engine	N	Code CNTC	Y	CONTINUOUS VARIABLE VALVE TIMING			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	CBPA	N	N			
N	N	Engine Code	N	CBPA	N	N			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	(CPLA). 2.0L Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	(CPKA). 1.8L Volkswagen Passat, Jetta, Beetle, Beetle Convertible	Y	MECHANICAL HYDRAULIC VVT SYSTEM ON INTAKE C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine Code	N	CRUA = Audi A3, VW Golf, Jetta	Engine Code	CVCA = VW Passat, Beetle, Beetle C			
N	N	Engine code	N	: CDVB	Y	Electronic control / Hydraulic adjustment			
N	N		N		Y	position of intake/exhaust camshaft electronically			
N	N		N		Y	position of intake/exhaust camshaft electronically			
N	N	Engine Code	N	CNRB	N	N			
N	N		N		Y	INTAKE / EXHAUST CAM TIMING ADJUSTED HYDRAU			

| | | |

Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
	1	Lithium Ion		266	5.00	37.0	On-Board		

1	NiMH	288	6.00	21.5	On-Board

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger
Electrical Regen Brake	Both	Y						1	AC Induction

Other	BRAKE PEDAL TRIGGERED	Both	REGENERATIVE HYDRAULIC MECHANICAL BRAKE SYSTEM	1	Other

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W40 VW 50501
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
	40			GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				CRDI	Common Rail Direct Diesel Injection		N		5W30 VW 50700
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		5W/30, VW50400
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		10W60 VW 50101
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W40
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W40 VW 50200
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /
				GDI	Spark Ignition Direct Injection		N		5W30 VW 50400 /

GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40
GDI	Spark Ignition Direct Injection	N	5W40
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
GDI	Spark Ignition Direct Injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 504 00
MFI	Multipoint/sequential fuel injection	N	0W40 / VW50200
MFI	Multipoint/sequential fuel injection	N	10W60 VW 50101
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
MFI	Multipoint/sequential fuel injection	N	5W30 VW 50400 /
GDPI	Spark Ignition direct & ported injection	N	5W30 VW 50400
MFI	Multipoint/s	N	5W30 VW
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W-40 VW50200
GDI	Spark Ignition Direct Injection	N	5W40 / VW50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
MFI	Multipoint/sequential fuel injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
CRDI	Common Rail Direct Diesel Injection	N	5W40 VW 50501
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200
CRDI	Common Rail Direct Diesel Injection	N	5W30 VW 50700
GDI	Spark Ignition Direct Injection	N	5W40 VW 50200

3 PHASE CURRENT	PERM. MAGNET	GDI	Spark Ignition	Direct Injection	N	5W40 VW 50200

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AV-S8)	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AV-S8)	Auto(AV-S8)	Audi A6 CVT					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 quattro					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S6)	Auto(AM-S6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Manual(M6)	Manual(M6)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(AM-S7)	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(AM-S6)	Auto(AM-S6)	TT Coupe quattro
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
Y	Yes	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S7)	Auto(AM-S7)	
N	No	Auto(AM-S8)	Auto(AM-S8)	VENENO
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Jetta Base
N	No	Manual(M5)	Manual(M5)	
N	No	Manual(M6)	Manual(M6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M5)	Manual(M5)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Manual(M6)	Manual(M6)	
N	No	Auto(AM-S6)	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

Y	Yes	Auto(S8)	Auto(S8)	Touareg Hybrid

| EPA Calcul | MFR Calcu | EPA Calculated Gas G | [redacted] | [redacted] | [redacted]

24.9	[redacted]	4	4 FVGAJ03.0AUD	5
33.3		6	6 FVGAV02.0AUA	5
33.3		6	6 FVGAV02.0AUA	5
23.7		4	4 FVGAV04.0NUA	5
19.5		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
21.9		4	4 FVGAV04.0NUA	5
18.3		3	3 FVGAV06.0VLN	5
15.9		1	1 FVGAV06.8ELP	5
12.6		1	1 FVGAV08.0GLB	5
16.4		1	1 FVGAV06.5LLR	5
14.6		1	1 FVGAV06.5LLR	5
20.0		3	3 FVGAV05.2NLE	5
15.8		1	1 FVGAV06.	5
37.0		7	7 FVGAV02.0VPD	7
35.9		7	7 FVGAV02.0VPD	7
33.9		6	6 FVGAV02.0VPD	7
46.6		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
46.4		8	7 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0VPD	7
33.3		6	6 FVGAV02.0VPD	7
45.8		8	7 FVGAV02.0VAL	5
33.1		6	6 FVGAV02.0VPD	7
45.3		8	7 FVGAV02.0VAL	5
32.2		6	6 FVGAJ02.0VUE	5
31.4		6	6 FVGAJ02.0VUE	5
24.8		5	5 FVGAV03.6VUF	5
32.4		6	6 FVGAV02.0VSE	5
38.9		7	7 FVGAV02.0APA	9
39.3		7	7 FVGAV02.0APA	9
48.3		8	8 FVGAV02.0VAL	5
48.2		8	8 FVGAV02.0VAL	5
35.9		7	7 FVGAV02.0APA	9
35.8		7	7 FVGAV02.0APA	9
39.4		7	7 FVGAV02.0VPD	7
38.4		7	7 FVGAV02.0VPD	7
34.8		7	7 FVGAV02.0VPD	7
49.2		8	8 FVGAV02.0VAL	5
34.9		6	6 FVGAV02.0VUC	5
35.9		7	7 FVGAV02.0VUC	5
48.7		8	8 FVGAV02.0VAL	5
34.0		6	6 FVGAV02.0VPD	7
37.7		7	7 FVGAV02.0VPD	7
37.3		7	7 FVGAV02.0VPD	7
46.2		8	7 FVGAV02.0VAL	5
46.9		8	7 FVGAV02.0VAL	5
28.5		5	5 FVGAV03.6VUG	5
29.7		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAJ02.0VUE	5
29.6		5	5 FVGAT03.0NU2	5
25.0		4	4 FVGAT03.6VUK	5

28.2	[redacted]	5	5 FVGAT03.0VUH	5

#2 Smog R	#2 Mfr Sm	#2 EPA Sm	SmartWay	#3 Smog R	#3 Mfr Sm	#3 EPA Sm	SmartWay	#4 Smog R	#4 Mfr Sm

FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VPE	7
FVGAV02.0VPE	7
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5
FVGAV02.0VBD	5

#4 EPA Sm	SmartWay	$ You Save	$ You Spen	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		500		379	267	328			
		3250		326	236	285			
		750		362	256	314			
		0		379	280	334			
		500		366	271	323			
		500		374	280	332			
			500	415	295	361			
		0		398	277	343			
			1500	446	314	386			
			500	415	295	361			
		0		398	277	343			
		750		360	272	320			
			1500	452	306	386			
			2000	482	326	412			
		1250		416	267	349			
			2500	493	321	416			
		1250		416	267	349			
			2000	473	303	397			
			2000	484	299	401			
		1000		426	280	360			
			2000	473	303	397			
			2000	492	310	410			
			5750	640	403	534			
			1000	420	317	373			
			1500	451	313	389			
			1500	446	316	387			
			1500	452	322	393			
			2500	496	347	429			
		500		430	328	385			
		0		369	298	337			
			1750	541	369	464			
			4750	570	409	498			
			5750	656	394	538			
			9250	772	439	622			
			6750	686	400	557			
			9250	753	454	618			
			5750	656	394	538			
			9250	772	439	622			
			6750	686	400	557			
			9250	753	454	618			
			4750	562	379	480			
			4750	558	398	486			
			4750	614	355	497			
		0		381	289	340			
			2500	488	321	413			
			3250	519	341	439			
			2500	488	321	413			
			3250	519	341	439			
			2500	500	341	428			
			3250	531	330	441			
			3250	531	330	441			
			3250	534	331	442			

	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	6750	629	441	544
	11000	831	523	692
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
3250		334	227	286
750		358	271	319
750		355	258	311
2250		347	238	298
2000		351	239	301
500		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
3250		332	223	283
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462

2500	447	372	413

CO2-City L	CO2-Hwy I	CO2-Comb	CO2-City L	CO2-Hwy I	CO2-Comb	CO2-PHEV	240V Char	120V Char	PHEV Tota
309.0	191.0	255.9	378.7	267.1	328.5				
247.7	165.1	210.5	325.6	236.3	285.4				
289.0	188.0	243.6	362.1	255.5	314.1				
305.0	200.0	257.8	378.6	280.1	334.3				
294.0	198.0	250.8	366.0	271.0	323.2				
292.0	199.0	250.2	373.7	280.2	331.6				
327.0	210.0	274.4	415.0	295.0	361.0				
321.2	202.4	267.7	398.0	276.6	343.4				
353.0	224.0	295.0	445.7	313.9	386.4				
327.0	210.0	274.4	415.0	295.0	361.0				
321.2	202.4	267.7	398.0	276.6	343.4				
282.0	189.0	240.2	360.0	272.0	320.4				
358.0	219.0	295.4	452.0	306.0	386.3				
383.5	233.0	315.8	481.7	326.0	411.6				
331.0	194.0	269.4	415.7	267.3	348.9				
385.0	236.0	318.0	492.9	320.9	415.6				
331.0	194.0	269.4	415.7	267.3	348.9				
376.5	225.0	308.3	473.4	302.9	396.7				
391.0	224.0	315.9	483.9	299.0	400.7				
339.0	198.0	275.6	425.6	280.1	360.1				
376.5	225.0	308.3	473.4	302.9	396.7				
396.0	226.0	319.5	492.3	309.7	410.1				
515.0	310.0	422.8	640.3	403.3	533.6				
331.0	226.0	283.8	419.7	316.6	373.3				
357.5	223.0	297.0	451.0	312.5	388.7				
357.0	230.0	299.9	445.6	315.7	387.1				
358.0	230.0	300.4	451.6	321.9	393.2				
390.0	251.0	327.4	496.0	347.0	429.0				
348.0	231.0	295.4	430.5	328.5	384.6				
380.0	223.0	309.4	369.0	298.0	337.0				
446.0	260.0	362.3	541.0	369.0	463.6				
458.0	295.0	384.6	569.6	409.5	497.6				
540.6	299.8	432.3	656.3	394.3	538.4				
651.3	362.7	521.4	771.6	439.1	622.0				
577.0	309.4	456.6	685.6	400.2	557.2				
646.3	377.5	525.3	753.1	454.0	618.5				
540.6	299.8	432.3	656.3	394.3	538.4				
651.3	362.7	521.4	771.6	439.1	622.0				
577.0	309.4	456.6	685.6	400.2	557.2				
646.3	377.5	525.3	753.1	454.0	618.5				
466.0	296.0	389.5	562.0	379.0	479.6				
463.0	307.0	392.8	558.0	398.0	486.0				
499.5	269.5	396.0	613.8	354.8	497.3				
311.0	214.0	267.4	381.4	289.2	339.9				
396.0	248.0	329.4	488.0	321.0	412.8				
443.0	266.0	363.4	519.0	341.0	438.9				
396.0	248.0	329.4	488.0	321.0	412.8				
443.0	266.0	363.4	519.0	341.0	438.9				
401.0	256.0	335.8	500.0	341.0	428.4				
427.7	252.5	348.9	530.7	330.5	440.6				
427.7	252.5	348.9	530.7	330.5	440.6				
444.0	243.0	353.6	534.0	330.6	442.5				

427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
708.0	392.0	565.8	831.0	523.0	692.4
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
255.0	158.0	211.4	334.2	226.8	285.9
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3
272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
253.0	155.0	208.9	331.8	222.7	282.7
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8

354.0	267.0	314.8	446.9	371.8	413.1

City PHEV	Hwy PHEV	Comb PHE	MDPV?	or Adj Comb	Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
			N	3.7		3.7			
			N	2.8		2.8			
			N	3.6		3.6			
			N	3.8		3.8			
			N	3.7		3.7			
			N	3.7		3.7			
			N	4.0		4.0			
			N	3.8		3.8			
			N	4.3		4.3			
			N	4.0		4.0			
			N	3.8		3.8			
			N	3.6		3.6			
			N	4.3		4.3			
			N	4.5		4.5			
			N	3.4		3.4			
			N	4.8		4.8			
			N	3.4		3.4			
			N	4.5		4.5			
			N	4.5		4.5			
			N	3.6		3.6			
			N	4.5		4.5			
			N	4.5		4.5			
			N	5.9		5.9			
			N	4.2		4.2			
			N	4.3		4.3			
			N	4.3		4.3			
			N	4.3		4.3			
			N	4.8		4.8			
			N	3.7		3.7			
			N	3.8		3.8			
			N	4.5		4.5			
			N	5.6		5.6			
			N	5.9		5.9			
			N	7.1		7.1			
			N	6.2		6.2			
			N	7.1		7.1			
			N	5.9		5.9			
			N	7.1		7.1			
			N	6.2		6.2			
			N	7.1		7.1			
			N	5.6		5.6			
			N	5.6		5.6			
			N	5.6		5.6			
			N	3.8		3.8			
			N	4.8		4.8			
			N	5.0		5.0			
			N	4.8		4.8			
			N	5.0		5.0			
			N	4.8		4.8			
			N	5.0		5.0			
			N	5.0		5.0			
			N	5.0		5.0			

N	5.3	5.3
N	3.8	3.8
N	3.8	3.8
N	5.3	5.3
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	10.0	10.0
N	7.7	7.7
N	8.3	8.3
N	6.2	6.2
N	7.7	7.7
N	3.6	3.6
N	3.7	3.7
N	3.8	3.8
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	3.7	3.7
N	4.0	4.0
N	2.9	2.9
N	3.8	3.8
N	2.9	2.9
N	4.0	4.0
N	4.0	4.0
N	5.0	5.0
N	4.0	4.0
N	3.4	3.4
N	3.3	3.3
N	2.8	2.8
N	2.8	2.8
N	3.6	3.6
N	3.6	3.6
N	3.3	3.3
N	3.4	3.4
N	3.7	3.7
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	2.8	2.8
N	3.8	3.8
N	3.6	3.6
N	3.6	3.6
N	2.9	2.9
N	2.9	2.9
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	5.3	5.3

N	4.8	4.8

EPA_INCR	MFR_EPA	EPA_CALC	EPA_CALC	EPA_RND	EPA_RND	EPA_RND	EPA_RND	EPA_UNRI	EPA_UNRI

EPA_UNR	EPA_UNR	EPA_UNR	EPA_UNR	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
						Mr Richard E Thomas Jr	
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Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

Mr Richard E Thomas Jr

To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Mon 8/18/2014 4:55:51 PM
Subject: latest EPA EV and PHEV calculators attached
PHEV Calculator v17 with sample data-from Rob-8-13-2014.xlsm
2015 generic EV Label calculations-1-18-13.xlsm

Richard,

Last week, I promised to send you the latest PHEV calculator. Rob updated it to calculate total range, etc. Also, the Verify FE Label values are now calculated---they are pretty much in the upper right part of the spreadsheet.

The EV calculator hasn't changed, except I might not have sent you the 2015 model year calculator.

Dave

The calculated values for these methods are shown in the calculation worksheets in rows 25-30.

		For model years up to and including 2019	
		Is it a dual fuel vehicle under 49 U.S.C. 32905/32906 and 49 CFR 538.5, i.e., does it meet minimum driving range requirements specified by DOT?	
		YES	**NO**
Does it exhibit blended operation during charge-depleting UDDS or HFET test procedures?	**YES**	A	C
	NO	B	

Description of CAFE methodologies. The methodology for GHG calculations is always Method C.	
A	CAFE = 50/50 weighting of electricity and gasoline efficiencies. Electricity efficiency is calculated using equivalent all-electric range and recharge event electricity, using DOE Petroleum Equivalence Factor (includes 0.15 adjustment)
B	CAFE = 50/50 weighting of electricity and gasoline = 50/50 weighting of charge-depleting and charge-sustaining modes, using DOE Petroleum Equivalence Factor (includes 0.15 adjustment)
C	Utility Factor weighting of charge-depleting and charge-sustaining modes. Electricity is counted only on an energy equivalent basis (no use of DOE Petroleum Equivalence Factor or 0.15 adjustment)
D	Utility Factor weighting of charge-depleting and charge-sustaining modes. Electricity is counted only on an energy equivalent basis (with DOE Petroleum Equivalence Factor including 0.15 adjustment)

d use. The calculated values

For 2020 and later model years
D

y for GHG calculations is	Examples
ciencies. Electricity efficiency is arge event electricity, using DOE ent)	None
0/50 weighting of charge-depleting quivalence Factor (includes 0.15	Chevrolet Volt Ford Fusion/C-Max Honda Accord Porsche Spyder
e-sustaining modes. Electricity is f DOE Petroleum Equivalence Factor	Toyota Prius Porsche Panamera
e-sustaining modes. Electricity is E Petroleum Equivalence Factor	None (applies only after 2019 model year)

Enter data ONLY in GREEN cells

Enter Vehicle Information Here:	
Model Year:	2014
Vehicle Category:	Passenger Vehicle (PV)
Manufacturer Name:	Zoom Motor Co.
Model Name:	Zoom One
Additional Descriptors (e.g., Eco Mode, Config No.):	1

CAFE, GHG, AND LABEL CALCULATIONS

CAFE & GHG CALCULATIONS	Units	City
Fraction of Transition Cycle Allocated to Charge-Depleting (Zn)		0.0040
Charge-Depleting Range (Rcda)	miles	29.68
Equivalent All Electric Range, Unadjusted (calculated per 86.1866-12(b	miles	-0.22
Charge-Depleting DC Energy Consumed	W-hours	6357
Charge-Depleting AC Electricty Consumption Rate	AC W-hrs/mi	167.33
Charge-Depleting Incentivized Fuel Economy (uses DOE Petroleum Equiv Facto	MPGe	490.4
Charge-Depleting gasoline CREE, utilitized	g/mi	316.0
Fleet Utility Factor	UF	0.7423
Charge-Depleting Fuel Consumption Rate, utilitized	gal-e/mi	0.0392
Charge-Depleting CO2 Emissions	g/mi	419.1

CAFE & GHG VALUES		City
A. Composite CD/CS Incentivized Fuel Economy (for dual fuel "blended	MPGe	**-8.6799**
B. Composite CD/CS Incentivized Fuel Economy (for dual fuel "non-ble	MPGe	**40.8266**
C. Composite CD/CS Fuel Economy (if NOT a CAFE dual fuel vehi	MPGe	**19.5051**
D. Composite CD/CS Fuel Economy (for after model year 2019)	CALCULATI	
E. Composite CD/CS CREE (does not include upstream emissions	g/mi	**423**
F. Composite CD/CS CREE (includes net upstream emissions per	g/mi CALCULATI	

LABEL CALCULATIONS		City
Charge-Depleting Cost per Mile - Electricity	$/mi	$ 0.025
Charge-Depleting Cost per Mile - Gasoline	$/mi	$ 0.220
Charge-Depleting Cost per Mile - Total Electricity + Gasoline	$/mi	$ 0.245
Charge-Sustaining Cost per Mile	$/mi	$ 0.23
MDIUF based on Rcda	mdiuf	0.512
MDIUF (for composite fractional UF calculations)	mdiuf	0.5857
Composite CD/CS Cost per Mile	$/mi	$ 0.24

Charge-Depleting Gasoline Consumption	gals	1.40048
Charge-sustaining Driving Range	miles	226.56
Charge-Depleting CO2	g/mi	520.966

LABEL VALUES		**City**
Charge-Depleting Range (Rcda)	miles	23.87
All-Electric Range (AER)	miles	0.00
Total Driving Range	miles	
Charge-Depleting Fuel Economy (MPGe)	mpge	15.424
Charge-Depleting Electricity Consumption Rate	kWh/100mi	20.9
Charge-Depleting Gasoline Consumption Rate	gal/100mi	5.8664
Charge-Sustaining Fuel Economy	mpg	16.3
Charge-Sustaining Fuel Consumption Rate	gal/100mi	6.1
Annual Fuel Cost	$/year	
5-Year Save/Spend Value (negative value = SPEND)	$/5-years	
Composite CD/CS CO2 (fractional UF calculation)	g/mi	536.136
Composite CD/CS Fuel Economy (fractional UF calculation)	mpge	14.37

HOV VALUES (used for specific state requirements)		**City**
MDIUF based on unadjusted Rcda	mdiuf	0.5824
Charge-Depleting Fuel Economy	mpge	19.17
Composite CD/CS Fuel Economy (lumped UF method)	mpge	20.0081
MDIUF (for composite fractional UF calculation)	mdiuf	0.65524
Composite CD/CS Fuel Economy (fractional UF method)	mpge	19.69372

Enter data ONLY in GREEN cells

Enter Test Information Here:	Test Date
Charge-Depleting City:	2/19/2014
Charge-Depleting Highway:	2/21/2014
~~DELETE; COULD BE 5-CYCLE~~ ~~Charge-Sustaining City:~~	
~~DELETE; COULD BE 5-CYCLE~~ ~~Charge-Sustaining Highway:~~	

ENTER DATA HERE: CHARGE-SUSTAINING AND CHARGE-DEP

Highway	Combined
0.3776	
24.33	27.27
6.33	
6310	
205.32	184.425
399.6	
85.9	
0.3453	
0.0113	
237.5	

CHARGE-SUSTAINING INPUTS: MPG, CREE, CO2			
Fuel Economy, Unadjusted			
Fuel Economy, Adjusted 5-Cycle or Derived 5-Cycle			
CREE, Unadjusted			
CO2, Unadjusted			
CO2, Adjusted 5-Cycle or Derived 5-Cycle			
ADDITIONAL INPUTS FOR LABEL AND CREE CALCULATIONS			
Gasoline cost	$/gallon	$ 3.75	Fuel tank size (U.S. g
Electricity cost	$/kW-hour	$ 0.12	Vehicle footprint (s
Average vehicle MPG	MPG	23	
Average vehicle 5-year cost	$	$ 11,500	

Highway	Combined
43.6205	**-18.8507**
51.6338	**45.0717**
28.5229	**22.7**
CALCULATION UNDER DEVELOPMENT	
297	**366**
CALCULATION UNDER DEVELOPMENT	

CITY (UDDS) CHARGE-DEPLETING INPUTS				
			Which cycle/phase number is the transition cycle?	
			Enter the Total Recharge Energy (AC Watt-Hours):	
			Enter the unadjusted all-electric range, if any (miles):	
Cycle/Phase No.	**Cycle/Phase Target Distance**	**Cycle/Phase Measured Distance**	**Integrated Amp-Hours Electricity Used**	**Average Cycle Voltage**
No.	*miles*	*miles*	*Amp-hours*	*Volts*
1	7.45	7.424	3.858	542
2	7.45	7.399	7.546	535
3	7.45	7.419	11.296	530
4	7.45	7.407	11.794	525
5	7.45	7.413	11.796	520
6	7.45	7.429	11.880	515
7	7.45			

Highway	Combined
	21.02
$ 0.034	
$ 0.139	
$ 0.173	
$ 0.17	
0.417	0.472
0.4900	
$ 0.17	$ 0.21

0.65020	1.06285
319.37	268.32376
329.739	434.914

Highway	Combined
17.52	**21.0**
0.00	**0.0**
	290
21.948	**18.0**
28.5	**24.0**
3.7104	**4.9**
21.8	**18.0**
4.6	**5.6**
	$ 3,150.00
	$ (4,250.00)
376.761	**464**ne transition cycle?
21.48	**17**y (AC Watt-Hours):

ter the unadjusted all-electric range, if any (miles):

Highway	Combined
0.5184	
30.47	
29.0190	**23.3**
0.59549	
29.04297	**23.0**

8	7.45			
9	7.45			
10	7.45			
11	7.45			
12	7.45			
13	7.45			
14	7.45			
15	7.45			
16	7.45			
17	7.45			
18	7.45			
19	7.45			
20	7.45			

HIGHWAY (HFET) CHARGE-DEPLETING INPUTS				
No.	**Distance**	**Distance**	**Used**	**Voltage**
No.	*miles*	*miles*	*Amp-hours*	*Volts*
1	10.3	10.228	5.040	542
2	10.3	10.237	9.888	535
3	10.3	10.239	11.736	530
4	10.3	10.221	11.746	525
5	10.3			
6	10.3			
7	10.3			
8	10.3			
9	10.3			
10	10.3			
11	10.3			
12	10.3			
13	10.3			
14	10.3			
15	10.3			
16	10.3			
17	10.3			
18	10.3			
19	10.3			
20	10.3			



Values for fueleconomy.gov spreadsh

Charge Sustaining Operation	
City FE (Guide) - Conventional Fuel	Hwy FE (Guide) - Conventional Fuel
16	22

Test Date	Test Number/Identifier
2/19/2014	ABC123456
2/21/2014	DEF789456

CHARGE-DEPLETING

	City	Highway
mpg	21.3	27.6
mpg	16.3	21.8
g/mi	417.0	322.0
g/mi	416.0	321.0
g/mi	545.0	408.0

ONS

allons)	15.30
quare feet)	

phase number is the transition cycle?	5
tal Recharge Energy (AC Watt-Hours):	5000
usted all-electric range, if any (miles):	

Fuel Economy	CO2	CREE
MPG	*g/mi*	*g/mi*
20.1840	440	441
23.1860	383	384
23.3090	381	382
18.8140	472	473
18.1170	491	492
17.4590	509	510

UDDS CALCULATIONS

Cycle/Phase No.	Gasoline Consumed	CO2	Net Amp-Hours Used Per Cycle
No.	*gal*	*grams*	*Amp-hours*
1	0.3678	3266.5600	3.858
2	0.3191	2833.8170	3.688
3	0.3183	2826.6390	3.75
4	0.3937	3496.1040	0.498
5	0.4092	3639.7830	0.002
6	0.4255	3781.3610	0.084
7			

		3
		5000
Economy	**CO2**	**CREE**
MPG	*g/mi*	*g/mi*
34.5710	257	258
39.8000	223	224
33.6010	264	265
30.5800	291	292

8			
9			
10			
11			
12			
13			
14			
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16			
17			
18			
19			
20			

HFET CALCULATIONS			
No.	**Consumed**	**CO2**	**Per Cycle**
No.	*gal*	*grams*	*Amp-hours*
1	0.2959	2629.2626	5.040
2	0.2572	2285.8346	4.848
3	0.3047	2708.0740	1.848
4	0.3342	2970.3737	0.01
5			
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peration

Comb FE (Guide) - Conventional Fuel	City Unadj FE - Conventional Fuel	Hwy Unadj FE - Conventional Fuel	Comb Unadj FE - Conventional Fuel	City Unrd Adj FE - Conventional Fuel	Hwy Unrd Adj FE - Conventional Fuel	Comb Unrd Adj FE - Conventional Fuel
18	21.30000	27.60000	23.7383	16.3	21.8	18.3876

DC Energy Consumed	AC Energy Consumed	Cumulative Cycle Distance	City Fleet Utility Factor	City FUF x CREE	Electric Only Fuel Consumption	Total Fuel Consumption Rate (gas + electric)
W-hours	*W-hours*	*mi*	*UF*	*UF*	*gal/mi equiv*	*gal/mi equiv*
2091.036	1644.577	7.45	0.2427	107.0208	0.00657	0.0561
1973.080	1551.806	14.90	0.1832	70.3626	0.00622	0.0494
1987.500	1563.147	22.35	0.1373	52.4635	0.00625	0.0492
261.450	205.628	29.80	0.1026	48.5075	0.00082	0.0540
1.040	0.818	37.25	0.0765	37.6482	0.000003	0.0552
43.260	34.024	44.70	0.0572	29.1703	0.00014	0.0574

Consumed	Consumed	Cycle Distance	Utility Factor	CREE	Consumption	(gas + electric)
W-hours	*W-hours*	*mi*	*UF*	*UF*	*gal/mi equiv*	*gal/mi equiv*
2731.680	2164.5470	10.30	0.1232	31.8005	0.00628	0.0352
2593.680	2055.1977	20.60	0.1167	26.1753	0.00596	0.0311
979.440	776.0953	30.90	0.1054	27.9699	0.00225	0.0320
5.250	4.1600	41.20	0.0921	26.8637	0.00001	0.0327

		Charge-Depleting Operation				
Charge-Sustaining Driving Range	Units	City2 FE (Guide) - Alternative Fuel	Hwy2 Fuel FE (Guide) - Alternative Fuel	Comb2 Fuel FE (Guide) - Alternative Fuel	City2 Unadj FE - Alternative Fuel	Hwy2 Unadj FE - Alternative Fuel
268.32376	kW-hr/100 mi	21	29	24	16.8	20.5
	MPGe	15	22	18	19.17	30.47

Total Fuel Consumption (gas + electric)	FUF x Total Consumption	Adjusted Cycle Measured Distance	Adjusted Cycle Theoretical Cumulative Distance	MDIUF	MDIUF x Adjusted CO2	MDIUF x Adjusted Total Fuel Consumption
gal-equiv	*gal/mi equiv*	*miles*	*miles*	*UF*	*g/mi*	*gal-equiv*
0.4166	0.0136	5.99398	6.01	0.1757263	95.76614	0.01409
0.3652	0.0090	5.93565	11.99	0.1383336	66.04365	0.00975
0.3647	0.0068	5.95042	17.97	0.1104202	52.45313	0.00775
0.3998	0.0055	5.96915	23.97	0.0891345	52.20562	0.00687
0.4092	0.0042	5.98045	29.98	0.0721155	43.89052	0.00569
0.4265	0.0033	6.00438	36.00	0.0587504	36.99912	0.00482

(gas + electric)	Consumption	Distance	Distance	MDIUF	CO2	Consumption
gal-equiv	*gal/mi equiv*	*miles*	*miles*	*UF*	*g/mi*	*gal-equiv*
0.3601	0.0043	7.38118	7.43	0.2114744	75.32960	0.01064
0.3182	0.0036	7.36014	14.84	0.1582529	49.14852	0.00703
0.3277	0.0034	7.36838	22.25	0.1202870	44.20865	0.00550
0.3344	0.0030	7.36032	29.67	0.0923218	37.25791	0.00431

Comb2 Unadj FE - Alternative Fuel	City2 Unrd Adj FE - Alternative Fuel	Hwy2 Unrd Adj FE - Alternative Fuel	Cmb2 Unrd Adj FE - Alternative Fuel	Charge-Depleting Driving Range	City CO2 Rounded Adjusted	Hwy CO2 Rounded Adjusted
18.3	20.9	28.5	24.0	21.0	521	330
23.01	15.4	21.9	18.0			

Cycle Theoretical Cumulative Distance	MDIUF for HOV Calculation	MDIUF x Fuel Consumption
miles	*UF*	*gal/mi equiv*
7.45	0.2118876	0.01189
14.9	0.1589767	0.00785
22.35	0.1205502	0.00593
29.8	0.0923573	0.00499
37.25	0.0714659	0.00394
44.7	0.0558341	0.00321
52.15	0.0440269	

59.6	0.0350266	
67.05	0.0281049	
74.5	0.0227364	
81.95	0.0185387	
89.4	0.0152312	
96.85	0.0126063	
104.3	0.0105096	
111.75	0.0088250	
119.2	0.0074648	
126.65	0.0063621	
134.1	0.0054658	
141.55	0.0047364	
149	0.0041429	

Distance	**Calculation**	**Consumption**
miles	*UF*	*gal/mi equiv*
10.3	0.2780522	0.00979
20.6	0.1879014	0.00584
30.9	0.1295390	0.00415
41.2	0.0910246	0.00298
51.5	0.0651335	
61.8	0.0474159	
72.1	0.0350838	
82.4	0.0263611	
92.7	0.0200985	
103	0.0155403	
113.3	0.0121829	
123.6	0.0096856	
133.9	0.0078149	
144.2	0.0064083	
154.5	0.0053514	
164.8	0.0045619	
175.1	0.0039791	
185.4	0.0035569	
195.7	0.0032591	
206	0.0030555	

	Gasoline Adjusted CO2			Range	PHEV Composite MPG		
Comb CO2 Rounded Adjusted	City CO2 Rounded Adjusted	Hwy CO2 Rounded Adjusted	Comb CO2 Rounded Adjusted (as shown on FE Label)	Driving Range (rounded to nearest 10 miles)DISTANCE	City PHEV Composite MPGe	Hwy PHEV Composite MPGe	Comb PHEV Composite MPGe
435	545	408	483	290	14	21	17

PHEV Composite CO2			Charge Depleting Driving Range			Individual Utility Factors (MDIUFs)	
PHEV Composite Rounded Adjusted Combined CO2	PHEV Composite Rounded Adjusted Combined CO2	CO2-PHEV Composite Rounded Adjusted Combined CO2	City Range on Electricity (miles)	Hwy Range on Electricity (miles)	Comb Range on Electricity as shown on FE Label (miles)	City Utility Factor (MDIUF)	Hwy Utility Factor (MDIUF)
536	377	464	23.87	17.52	21.0	0.512	0.417

ility Factors (MDIUFs)	PHEV Charge Depleting Fuel Consumption		
Comb Utility Factor (MDIUF)	City (gal/100 mi)	Hwy (gal/100 mi)	Combined (gal/100 mi) as listed on blended PHEV labels
0.472	5.87	3.71	4.9

Version 15.

May 29, 2014.

Corrected table in READ ME! Worksheet for 2020 and later CAFE calculations. It indicated no use of 0.15 or DO

Columns AI and AJ, which use an adjustment factor based on the 5-cycle derived equation or 0.7 (whichever is

Cell D19 units changed to gal-e/mile (was gal/e).

Added capability to calculate the HOV lane values (used for specific state purposes).

E PEF, which was incorrect.

higher) are now used to calculate label values for Rcdc, Rcda, and AER. These values previously used 0.7 only.

Derived 5-cycle MPG Calculations For Electric Vehicles

Please Enter:

Model Year: 2015

Values in Yellow fill are used on FE Labels (window stickers)

Manufacturer Name: xxxxxxx

Model Name yyyyyyyy

Test Date: xx/yy/2014

I. Calculate Electric vehicle FE Label city, Hwy, Combined FE values using the 2008 (derived 5-cycle) method and the 30% cap method:

Enter unadjusted unrounded kW-hr/100mi Values (in red text blocks) as determined from SAE J1634:

		City (round mpg to 0.1mpg)	Highway (round mpg to 0.1mpg)	Calculated unadjusted combined	Units
Elect veh FE	unrounded kW-hr/100 mi	19.3900	25.3000	22.0495	kW-hr/100 mi
Elect veh FE	converted to mpg	**173.8**	**133.2**	152.8366	mpg

2008 FE Label method (Derived 5-cycle)

	Derived 5-cycle City	Derived 5-cycle Hwy	Adjusted Combined	Units
Calculate derived 5-cycle mpg:	**99.5**	**87.1**	**93.5**	mpg
convert back to kW-hr/100 mi:	**33.9**	**38.7**	**36.0**	**kW-hr/100 mi Derived 5-cycle**
Percent adjustment mpg:	**42.8%**	**34.6%**	**38.8%**	percent
MPG w/ 30% Cap	121.7	93.2	106.9856	MPGe with 30 % Cap
convert back to kW-hr/100 mi:	27.7043	36.1486	31.5042	kW-hr/100 mi w/30 % Cap
			31.5	
2014 Label Values:				
Rounded MPG w/30% cap:	122	93	107	
Rounded kW=hr/100 mi:	28	36	32	

II. Calculate Electric vehicle driving ranges using the unadjusted SAE J1634 method and the 2008 (derived 5-cycle) method:

Enter unadjusted City & Hwy Range Values in miles (in red text blocks) as determined from SAE J1634:

	City Range	Hwy Range	Combined Range	Rounded Range	Units	Method:
Calculate unadjusted driving range:	111.293	89.42	101.4502	101	miles	Unadjusted (SAE J1634)
Calculate adjusted driving range (2008 method, No Cap):	63.7	58.5	62.0636	62	miles	2008 (derived 5-cycle, mpg-based, No Cap)
Calculate adjusted driving range (2008 method, 30% Cap):	77.9	62.6	71.0151	71	miles	2008 (derived 5-cycle, mpg-based, 30% Cap)

III. Calculate Electric vehicle annual fuel cost and 5-year savings, per 40 CFR 600.311-12(e)

2008 MPG Factors:

ref. 40 CFR 600.210-08

City Intercept:	0.00326
City Slope:	1.1805
Hwy Intercept:	0.00138
Hwy Slope:	1.3466

Enter Average 2015 5-year Fuel Cost: $11,000

Enter U.S. electricity costs: $0.12 per kw-hr

(from CD-13-14 for 2015)

Calculate unrounded adjusted combined miles/kw-hr: 3.17418 mi/kw-hr

Petroleum Equivalency Factor for electricity; ref 10 CFR 474.3

33,705 watt-hr/gallon w/o 6.667 CAFE incentive no fuel fired accessories

Annual Miles	Cost	Units	Unrounded Annual Fuel Cost*	Method	2015 Label Rounded Annual Fuel Cost	2015 Label 5-year Amount You Save:
15,000	$0.12	per kw-hr	$648.00	2008 (derived 5-cycle, mpg-based, No Cap)	$650.00	$7,750
15,000	$0.12	per kw-hr	$567.08	2008 (derived 5-cycle, mpg-based, 30% Cap)	$550.00	$8,250

*Note: Annual fuel costs should be ASTM rounded to the nearest $50.

Toyota 2012 Placeholder Information for the EPA 2012 Printed Guide

EV

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Battery	Trans Type	Motor Size Type	EnergyConsumption (KW-hr/100mi)		Driving Range
					City	Hwy	(miles)
RAV4 EV	SUV-2WD	Lithium-Ion	Auto(A1)	115 kW AC Induction	NA	NA	NA

Availability:
Available for sale or lease nationwide in the late fall of 2014

Fuel Cell Vehicles

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Fuel Cell	Battery Size, Type	Trans Type	Motor Size Type	Fuel Type	Miles per Kilogram		Driving Range
							City	Hwy	(miles)
FCX Clarity	Midsize Hatchback - 101/13	PEM (Proton Exchange Membrane)	288 V Lithium-Ion	Auto(A1)	DC Permanent Magnet, brushless - 100 kW	Hydrogen	NA	NA	NA

Availability:
Available for lease in southern California in the late fall of 2014--limited availability

PHEV

Model Name	Veh. Class, BodyType, Pass/CargoVolume	Trans Type	Engine	No. of cyl	Motor	Battery Type	Fuel	Miles Per Gallon		Driving Range (miles)
								City	Hwy	
PRIUS Plug-in Hybrid	Midsize Hatchback - 94/22	Auto(AV) (CVT)	1.8L	4	18kW AC Induction	207 V Lithium-Ion	Gasoline	NA	NA	NA
							Electricity	NA	NA	NA

Availability:
Only available in selected areas of the U.S.

Diesel, HEV, FFV & Alt Fuel Vehicles

Model Name	Vehicle Class, Body Type, Pass/Cargo	Trans Type	No. of Cyl.	Engine	Fuel Type	Battery Type	Motor Size & Type	City MPG	Hwy MPG	Driving Range
X5 xDrive35d	SUV-4WD	Auto(S-6)	6	3.0 L	Diesel	N/A	N/A	N/A	N/A	N/A
ActiveHybrid 3	midsize, 4 dr, 102/10	Auto(S-8)	6	3.0 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A
ActiveHybrid 5	midsize, 4 dr, 106/13	Auto(S-8)	8	4.4 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A
ActiveHybrid 7L	large, 4 dr, 115/13	Auto(S-8)	8	4.4 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A

To: Good, David[good.david@epa.gov]
From: Schmidt, Oliver (EEO)
Sent: Mon 8/18/2014 5:57:09 PM
Subject: Automatic reply: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Hello,

thank you for your mail.
I am currently on vacation.

Oliver Schmidt

To: Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]; Ex. 7 @vw.com]; Ex. 7 Ex. 7 @vw.com]
From: Ex. 7
Sent: Mon 8/18/2014 6:30:34 PM
Subject: RE: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf
VWGoA-Placeholder_Info_EV-PHEV-etc-(dgood) for 2015 Printed Guide.xlsx

Hi Dave;

Here is the Excel file you sent with all the information I can provide at this time. I don't have interior and luggage volumes to provide to you at this time, but know it is expected to be in the EPA Compact class. If you have any other questions please contact me.

Best regards,

Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, August 18, 2014 1:56 PM
To: Ex. 7
Cc: Ex. 7
Subject: RE: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Ex. 7

I didn't receive the Excel file. Attached is a generic placeholder file which you can use.

Dave

From: Ex. 7 @vw.com]
Sent: Wednesday, August 13, 2014 8:23 AM
To: Good, David
Cc: Ex. 7

Subject: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Hi Dave;

Per the EPA August 5th guidance letter CD-14-16 we are providing information for a place holder in the printed version of the 2015 fuel economy guide for the Volkswagen "e-Golf", battery electric vehicle. This model falls in the Compact class and equipped with an 85 kW AC Permanent Magnet Synchronous Motor and Lithium-Ion battery.

If you need anything else to secure its mention in the printed guide please contact me directly.

Best regards,

Ex. 7

Ex. 7

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

Fax:

mailto:

Ex. 7

Volkswagen 2015 Placeholder Information for the EPA 2015 Printed Guide

EV

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Battery	Trans Type	Motor Size Type	EnergyConsumption (KW-hr/100mi)		Driving Range
					City	Hwy	(miles)
e-Golf	Compact Car	Lithium-Ion	Auto	85 kW AC Permanent Magnet Synchronous Motor	NA	NA	NA

To: richard.thomas@vw.com[richard.thomas@vw.com]; kachuen.wong@bmwna.com[kachuen.wong@bmwna.com]; thomas.hofmann@bmwna.com[thomas.hofmann@bmwna.com]; asw9@chrysler.com[asw9@chrysler.com]; j.foor@chrysler.com[j.foor@chrysler.com]; Dave Barker[dba1@subaru.com]; elarue1@ford.com[elarue1@ford.com]; jcusuman@ford.com[jcusuman@ford.com]; deborah.a.zielesch@gm.com[deborah.a.zielesch@gm.com]; laura.l.parker@gm.com[laura.l.parker@gm.com]; Bill Beggs[william.beggs@gm.com]; Darin_Johnson@AHM.Honda.com[Darin_Johnson@AHM.Honda.com]; peter_meier@ahm.honda.com[peter_meier@ahm.honda.com]; Tony D'Ambrosi[adambrosi@hatci.com]; Christine Ueno[cueno@hatci.com]; rseal3@jaguar.com[rseal3@jaguar.com]; vvarjabe@jaguar.com[vvarjabe@jaguar.com]; vvarjabe@jaguarlandrover.com[vvarjabe@jaguarlandrover.com]; kareen.toussagnon@daimler.com[kareen.toussagnon@daimler.com]; markus.loesch@daimler.com[markus.loesch@daimler.com]; roland.mulde@daimler.com[roland.mulde@daimler.com]; john.gantchar@na.mitsubishi-motors.com[john.gantchar@na.mitsubishi-motors.com]; david.patterson@na.mitsubishi-motors.com[david.patterson@na.mitsubishi-motors.com]; KhanF@NRD.NISSAN-USA.COM[KhanF@NRD.NISSAN-USA.COM]; ross.gatzke@porsche.us[ross.gatzke@porsche.us]; drobertson@mazdausa.com[drobertson@mazdausa.com]; nokawa@mazdausa.com[nokawa@mazdausa.com]; kiriri@nano.tec.toyota.co.jp[kiriri@nano.tec.toyota.co.jp]; Masahiro Konno[masahiro.konno@tema.toyota.com]; gbuffali@volvocars.com[gbuffali@volvocars.com]; plennvi@volvocars.com[plennvi@volvocars.com]; snagaraj@teslamotors.com[snagaraj@teslamotors.com]; oliver.schmidt@vw.com[oliver.schmidt@vw.com]; james@teslamotors.com[james@teslamotors.com]; Jackey Chen[jackey.chen@byd.com]; Scott Hu[scott.hu@byd.com]; Ott, William[ott.william@epa.gov]; Pidgeon, Bill[pidgeon.bill@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Ball, Joel[ball.joel@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Anderson, Tom[Anderson.Tom@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Good, David
Sent: Mon 8/18/2014 7:06:03 PM
Subject: Re: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014
Generic-Placeholder_Info_EV-PHEV-etc-(dgood) for Printed Guide.xlsx
CD-14-15-FE 2015 Label Guidance.pdf

To manufacturers FE Label contacts,

When you get a chance, please send me an excel spreadsheet with any placeholders for the 2015 Printed FE Guide for vehicles which will be labeled AFTER Aug 27, 2014 (and won't have FE Label data in Verify by that time).

I need any placeholders for any conventional hybrids, EVs, PHEVs, fuel cell vehicles, diesels, FFVs, CNG vehicles and alt fuel vehicles. Attached is a generic Excel spreadsheet which you can use to email your placeholder information to me.

[I don't need placeholder information for vehicles which already have 2015 FE Label information entered in Verify.]

I need your placeholders as soon as possible, no later than Tuesday, Aug 26, 2014 COB.

Note: I'll send a separate email message to each individual manufacturer with the data in Verify as of Aug 15,2014 for your review. The last page of the attached EPA guidance letter outlines the timeline for the 2015 Printed FE Guide. [Labor Day is approaching fast.]

Thanks

Dave

Toyota 2012 Placeholder Information for the EPA 2012 Printed Guide

EV

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Battery	Trans Type	Motor Size Type	EnergyConsumption (KW-hr/100mi)		Driving Range
					City	Hwy	(miles)
RAV4 EV	SUV-2WD	Lithium-Ion	Auto(A1)	115 kW AC Induction	NA	NA	NA

Availability:
Available for sale or lease nationwide in the late fall of 2014

Fuel Cell Vehicles

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Fuel Cell	Battery Size, Type	Trans Type	Motor Size Type	Fuel Type	Miles per Kilogram		Driving Range
							City	Hwy	(miles)
FCX Clarity	Midsize Hatchback - 101/13	PEM (Proton Exchange Membrane)	288 V Lithium-Ion	Auto(A1)	DC Permanent Magnet, brushless - 100 kW	Hydrogen	NA	NA	NA

Availability:
Available for lease in southern California in the late fall of 2014--limited availability

PHEV

Model Name	Veh. Class, BodyType, Pass/CargoVolume	Trans Type	Engine	No. of cyl	Motor	Battery Type	Fuel	Miles Per Gallon		Driving Range (miles)
								City	Hwy	
PRIUS Plug-in Hybrid	Midsize Hatchback - 94/22	Auto(AV) (CVT)	1.8L	4	18kW AC Induction	207 V Lithium-Ion	Gasoline	NA	NA	NA
							Electricity	NA	NA	NA

Availability:
Only available in selected areas of the U.S.

Diesel, HEV, FFV & Alt Fuel Vehicles

Model Name	Vehicle Class, Body Type, Pass/Cargo	Trans Type	No. of Cyl.	Engine	Fuel Type	Battery Type	Motor Size & Type	City MPG	Hwy MPG	Driving Range
X5 xDrive35d	SUV-4WD	Auto(S-6)	6	3.0 L	Diesel	N/A	N/A	N/A	N/A	N/A
ActiveHybrid 3	midsize, 4 dr, 102/10	Auto(S-8)	6	3.0 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A
ActiveHybrid 5	midsize, 4 dr, 106/13	Auto(S-8)	8	4.4 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A
ActiveHybrid 7L	large, 4 dr, 115/13	Auto(S-8)	8	4.4 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2565 PLYMOUTH ROAD
ANN ARBOR, MICHIGAN 48105-2498

OFFICE OF
AIR AND RADIATION

August 12, 2014

CD-14-15 (LDV/LDT/ICI/LIMO)

SUBJECT: Fuel Economy Label Information for 2015 Model Year

Dear Manufacturer:

This information in this letter supplements the information provided in EPA guidance letter CD-13-14 issued on November 22, 2013. Enclosed with this letter is information designed to guide you in your 2015 model year fuel economy labeling program.

Enclosure 1

"Fuel Economy Supplementary Information for 2015 Model Year" contains information about the printed Fuel Economy Guide and about posting 2015 fuel economy data on the EPA/DOE website (www.fueleconomy.gov).

Enclosure 2

Enclosure 2 provides instructions for submitting information to EPA for the Fuel Economy Guide for alternative-fueled vehicles, CNG vehicles, electric vehicles, plug-in hybrid vehicles, and sport utility vehicles.

Enclosure 3

Enclosure 3 contains the timetable for inclusion of fuel economy label values in the 2015 model year printed Fuel Economy Guide.

If you have any questions about these instructions, please contact your certification team representative.

Sincerely,

Byron J. Bunker, Director
Compliance Division
Office of Transportation and Air Quality

Enclosures

cc: Dennis Smith, DOE

ENCLOSURE 1
to CD-14-15

Fuel Economy Supplementary Information for the 2015 Model Year

Annual Fuel Cost Estimates

Annual fuel cost estimates for 2015 model year fuel economy labels (window stickers of new vehicles) were provided in EPA guidance letter CD-13-14, November 22, 2013.

Fuel Economy Ranges to be placed on FE Labels

Fuel economy ranges to be used on 2015 model year fuel economy labels were provided in EPA guidance letter CD-13-14, November 22, 2013.

Fuel Economy Data to be Included in the Printed Fuel Economy Guide

EPA and DOE will publish the printed copy of the Fuel Economy Guide once per year, normally in November. The printed Guide will be distributed to automobile dealerships, libraries, credit unions, etc. and published as a PDF file on the web site www.fueleconomy.gov.

Unless otherwise instructed, EPA will forward to DOE all 2015 MY fuel economy label values in the EPA database on the date indicated in Enclosure 3. DOE is then responsible for printing and distributing the Fuel Economy Guide. If a manufacturer wishes to exclude a model type from the printed Guide, a request providing justification for the exclusion must be submitted in writing to EPA for approval.

Release Date

The manufacturer-specified "release date" in the VERIFY database should correspond to the date that the vehicle will be introduced into commerce. EPA will use this date to determine when fuel economy information for a model type should be released to the public and listed at www.fueleconomy.gov.

EPA/DOE Fuel Economy Web Site (www.fueleconomy.gov)

The EPA and the Department of Energy (DOE) maintain a website devoted to fuel economy and related information: www.fueleconomy.gov. The web site contains the 2015 MY fuel economy label information in the EPA database (as the data becomes available throughout the model year) , plus tips and general information about the fuel economy of passenger cars and light trucks. The website is normally updated four times a month (normally on the 1st, 9th, 15th and 23rd of the month). As mentioned above, EPA will use the manufacturer-provided Release Date to determine which data are available to post on the website. If you need a 2015 fuel economy label posted on www.fueleconomy.gov on a specific date and time (e.g. to coincide with a manufacturer's press release), please contact Dave Good of my staff at (734) 214-4450 or good.david@epa.gov.

EPA encourages automobile manufacturers (and dealers) to link their web sites to the EPA/DOE site, as a public reference for fuel economy of passenger cars and light-duty trucks.

VW FOIA, EPA 06/20/2017 2017-FFP_014499

Displaying "fueleconomy.gov" on FE Labels (Window Stickers)

As a reminder, EPA labeling regulations require the EPA/DOE website address to be listed on your fuel economy labels, ref. 40 CFR 600.302-12(b)(5).

Gas Guzzler Tax

If, according to your calculations, one or more of your model types are subject to the Gas Guzzler Tax, those model types are noted by the letter "G" in the engine description section of the Fuel Economy Guide.

The total amount of tax is determined by the Internal Revenue Service (IRS). The manufacturer is responsible to the IRS for reporting and paying the Gas Guzzler Tax. The amount of the Gas Guzzler tax is required to be shown on the label, as determined from the tax schedule shown in 40 CFR 600.513-08, unless the manufacturer has been granted an alternative tax rate schedule. However, the IRS may audit your records and make its own determination about your tax liability. If the IRS determines a different tax rate after the model year, you will not be required to re-label unsold vehicles.

Limousine Manufacturers

Under the Revenue Consolidation Act of 1991, limousine manufacturers or modifiers are subject to the Gas Guzzler requirements. Manufacturers or modifiers of such vehicles should obtain fuel economy labels for their vehicles and conversions and pay the appropriate tax to the IRS.

VW FOIA, EPA 06/20/2017 2017-FFP_014500

ENCLOSURE 2
to CD-14-15

Supplementary Instructions for Submitting Fuel Economy Information to EPA for the 2015 Fuel Economy Guide

1. Background Information

For the 2015 Fuel Economy Guide, EPA will list all gasoline, diesel and alternative fuel vehicles together. This will help consumers find alternative fuel vehicles and compare their fuel economy with gasoline vehicles more conveniently through "one stop shopping."

The 2015 Guide will also separately list the following advanced technology and alternative-fueled vehicles:

Hybrid-Electric Vehicles (HEVs)
Plug-in Hybrid-Electric Vehicles (PHEVs)
Hydrogen Fuel Cell Vehicles (FCVs)
Electric Vehicles (EVs)
Diesel Fueled Vehicles
Ethanol (E85) Flexible-Fueled Vehicles
Compressed Natural Gas (CNG) Vehicles
Liquefied Petroleum Gas (LPG) Vehicles

For dual-fueled vehicles, the gasoline mpg values for the vehicle will be listed in both the Gasoline section of the Guide and the appropriate alternative-fuel section of the Guide.

2. Listing New Technology and Alternative-Fueled Vehicles

Manufacturers should provide the information as specified in the FE Label module of EPA's Verify database for new technology and alternative-fueled vehicles.

For **flexible fueled and dual-fueled vehicles**, manufacturers should enter the data into the EPA Verify database for both fuels in the same model type index by clicking on the buttons to "Add Another Fuel Usage" and "Add Another Base Level Fuel Usage." For example, enter the gasoline test data in "Base Level Fuel Usage #1" and the E85 test data in "Base Level Fuel Usage #2." Please do not enter the gasoline and alternative fuel data using two separate index numbers.

For **compressed natural gas (CNG) vehicles**, manufacturers should provide the city, highway and combined fuel economy values in miles per gallon-equivalent, where one gallon-equivalent is equal to 121.5 standard cubic feet of CNG; ref. the "gasoline gallon equivalent" definition provided in 40 CFR 600.002.

For **electric vehicles and plug-in hybrid vehicles**, manufacturers should provide the city, highway and combined fuel economy/energy consumption values when operating on electricity in units of miles per gallon-equivalent and also kW-hr/100 miles, where one gallon of gasoline is equivalent to 33.705 kilowatt-hours of electricity; ref. the "gasoline gallon equivalent" definition provided in 40 CFR 600.002. In addition, please enter in the model type comments field (GL-4) the adjusted rounded driving range (miles) when operating on electricity for city (FTP) and

VW FOIA, EPA 06/20/2017 2017-FFP_014501

highway operation. For PHEVs, please enter in the model type comments field the multi-day individual utility factors for city, highway and combined (55% city/45%highway) operation.

When entering charge depleting data in the Test Information module of Verify, please enter MFR FE in units of miles per gallon (not in units of kW-hr/100 miles). If this is your first time entering EV and PHEV charge depleting data into EPA's Verify database, please email Dave Good (good.david@epa.gov) for an example template showing our preferred method of entering charge depleting test data into EPA's data base.

3. Placeholders for New Technology and Alternative-Fueled Vehicles Which will be Available Later in the 2015 Model Year

If the city and highway fuel economy values and driving ranges will not be available by August 27, 2014, manufacturers should submit the information in the tables below with the fuel economy and driving ranges listed as "NA" (not available). Please include the manufacturer/division name, carline name, transmission type, engine displacement in liters, engine number of cylinders, vehicle class, interior volume for 2-door, 4-door, hatchback models, and the cargo volume (if applicable). Please don't send placeholder information for vehicles which are already in EPA's Verify database. The information should be emailed to Dave Good at good.david@epa.gov on or before the date listed in Enclosure 3.

To provide placeholder information for **fuel cell vehicles**, manufacturers should provide an Excel file with the following information, plus a short explanation of the availability of the vehicles, as follows:

Model Name	Veh. Class, Body type, Pass/Cargo Volume	Trans Type	Type of Fuel Cell	Motor Type & Power	Energy Storage Device and Rating	Fuel Type	Miles Per Kilogram		Driving Range (miles)
							City	Hwy	
AB	Compact 2dr – 91/12	Auto (A1)	PEM	100 kW-AC Induction	144 Volt Nickel Metal Hydride	Hydrogen	NA	NA	NA
CD	SUV	Auto CVT	PEM	100 kW-DC Brushless	244 Volt Lithium Ion	Hydrogen	NA	NA	NA

Availability:

AB Fuel Cell vehicles are initially available in California and Arizona only.

CD Fuel Cell vehicles will be available nationwide (for lease only) in the late fall of 2014.

Additional information may also be included if necessary to describe your vehicles.

VW FOIA, EPA 06/20/2017 2017-FFP_014502

To provide placeholder information for **electric vehicles,** manufacturers should provide an Excel file plus a short explanation of the availability of the vehicles, as follows:

Carline Name	Veh. Class, Body Type, Pass/Cargo Volume	Type of Battery	Trans Type	Motor Size Type	Energy Consumption (KW-hr/100mi)		Driving Range (miles)
					City	Hwy	
AB Electric	Large Cars 4dr-113/13	Lead-Acid	Auto (A1)	95 KW AC Induction	NA	NA	NA
AB Electric	Large Cars 4dr-113/13	Nickel-Metal Hydride	Auto (A2)	45 KW AC Induction	NA	NA	NA
CD Electric	Subcompact 2 dr-85/11	Lithium-Ion	Auto CVT	62 KW DC	NA	NA	NA

Availability:

AB Electric vehicles are initially available to the U.S. Postal Service in California and Arizona only.

CD Electric vehicles will be available nationwide (initially for lease only) in the late fall of 2014.

Additional information may also be included if necessary to describe your vehicles.

To provide placeholder information for **other alternative fueled vehicles**, manufacturers should provide an Excel file with the following information:

Model Name	Vehicle Class, Body Type Pass/Cargo	Trans Type	No. of cyl.	Engine	Fuel Type	Miles Per Gallon		Driving Range (miles)
						City	Hwy	
AA	Compact 4dr - 95/11	Auto(A5)	4	1.8L	Dedicated CNG	NA	NA	NA
BB	SUV-4WD	Auto(A4)	8	5.3L	E85	NA	NA	NA
					Gasoline	NA	NA	NA

To provide placeholder information for **plug-in hybrid electric vehicles (PHEVs)**, manufacturers should provide an Excel file with the information from both the electric vehicle table above and the "other alternative fueled vehicle" table above.

4. Listing Driving Ranges for Alternative-Fueled Vehicles

The calculation of the EPA driving range should be based on the adjusted combined fuel economy label value (rounded to the nearest whole mpg value) as determined in 40 CFR 600.210-08(c), (d), and (e), as applicable, and the useable fuel tank capacity of the vehicle (rounded to the nearest tenth of a gallon). Manufacturers should enter the driving range(s), rounded to the nearest mile, in the model type driving range field in the Fuel Economy Label module of EPA's Verify data base.

If several fuel tank capacities are available for a vehicle, a manufacturer should enter the driving range, rounded to the nearest mile, for the smallest and largest fuel tank available for the vehicle. Manufacturers should enter this information in the "model type driving range" field in the Fuel Economy Label module of EPA's Verify database. For example, manufacturers should enter 'nnn' for a single driving range or 'nnn/nnn' for model types which are available with multiple fuel tank capacities.

For dual-fueled vehicles, manufacturers should provide the driving range of the vehicle when operated on gasoline or diesel fuel, and the driving range when operated on any alternative fuel.

For **ethanol vehicles,** manufacturers should determine the vehicle's driving range rounded to the nearest mile by multiplying the adjusted combined fuel economy label value (rounded to the nearest whole mpg) by the vehicle's useable fuel storage capacity (rounded to the nearest tenth of a gallon); ref. 40 CFR 600.311-12(j)(1).

For **CNG vehicles,** manufacturers should deter mine the vehicle's driving range rounded to the nearest mile by multiplying the adjusted combined fuel economy label value (rounded to the nearest whole mpg equivalent) by the vehicle's usea ble fuel storage capacity (rounded to the nearest tenth of a gasoline gallon equivalent); ref. 40 CFR 600.311 -12(j)(3). The CNG fuel tank capacity used to calculate the EPA driving range should be based on 80 percent of the nominal fuel tank capacity (using a slow fill rate) in order to account for the reduced fuel tank capacity, which results from a fast fill rate.

For **electric vehicles,** manufacturers should determine the adjusted city and highway driving range as outlined in Section 8 of SAE J1634, Electric Vehicle Energy Consumption and Range Test Procedure, as published October 2002,[1] ref. 40 CFR 600.311-12(j)(2). Manufacturers should determine the combined driving range (rounded to the nearest mile) by arithmetically averaging the adjusted city and highway driving ranges, weighted 0.55 (city) and 0.45 (highway). The driving ranges shall be adjusted to reflect actual in-use driving conditions using one of the methods described in 40 CFR 600.210-12(d)(3).

For **plug-in hybrid vehicles when operating on electricity,** manufacturers should determine the adjusted city, highway and combined driving range (rounded to the nearest mile) as outlined in the provisions of 40 CFR 600.311-12(j)(4). For example, manufacturers should determine the adjusted city and highway charge-depleting driving range values (rounded to the nearest mile) as outlined in SAE J1711, Recommended Practice for Measuring the Exhaust Emissions and Fuel Economy of Hybrid-Electric Vehicles, Including Plug-In Hybrid Vehicles, June 2010. Manufacturers should determine the combined driving range by arithmetically averaging the adjusted city and highway driving ranges, weighted 0.55 (city) and 0.45 (highway). The driving ranges shall be adjusted to reflect actual in-use driving conditions.

For **hydrogen fuel cell vehicles**, manufacturers should determine the vehicle's adjusted driving range rounded to the nearest mile by multiplying the adjusted combined fuel economy label value (rounded to the nearest whole miles per kilogram) by the vehicle's useable fuel storage capacity (rounded to the nearest hundredth of a kilogram); ref. 40 CFR 600.311-12(j)(5). The driving range shall be adjusted to reflect actual in-use driving conditions.

5. Battery Charge Time for Electric Vehicles and Plug-in Hybrid Vehicles

For **electric and plug-in hybrid vehicles,** manufacturers should determine the time it takes to charge a fully depleted battery using a 120 and 240 volt power source as outlined in the provisions of 40 CFR 600.311-12(k). For example, manufacturers should charge the battery to the point that the battery meets the manufacturer's end-of-charge criteria, consistent with the

[1] With prior EPA approval, manufacturers may use SAE J1634, revised October, 2012, to determine the combined driving range.

VW FOIA, EPA 06/20/2017 2017-FFP_014504

procedures specified in SAE J1634 for electric vehicles and in SAE J1711 for plug-in hybrid electric vehicles.

6. Comparable Classes

2WD SUV Classification: When labeling 2-wheel drive SUVs, please continue to use the same vehicle classification category as in past model years (even though 2-wheel drive SUVs equal to or less than 6000 lbs GVWR will be included in 2015 passenger car CAFEs). For fuel economy labeling purposes, EPA will require 2015 and later model year 2WD SUVs to continue to be included in the 2WD SUV comparable class based on the provisions of 40 CFR 600.315-08(a)(1) and 600.315-08(a)(2).

Special Purpose Vehicle Classification: The "Special Purpose Vehicle" class is to be used when a vehicle does not fit into the definition of any comparable class, ref. 40 CFR 600.315-08(a)(3)(i). This situation is expected to be rare, but may occasionally happen for some types of transit vans, camper vans, limousines, dune buggies, amphibious vehicles, or other special vehicles. In addition, if a vehicle has features that could apply to more than one comparable class, EPA will determine which class is more appropriate, ref. 40 CFR 600.315-08(a)(3)(ii).

7. Engine /Model Type Descriptors: Engine and model type descriptors are only needed to identify two otherwise identical model types (so that the customer can easily identify the model). Please enter any needed basic engine/model type descriptors in the Verify FE Label module "Model Type Descriptor" field (field GL-78.2). The engine/model type description should be clear and concise (30 characters or less). For example, a manufacturer could enter "4-valve" in the model type descriptor field to distinguish between otherwise identical 2-valve models. The use of an engine/model type descriptor is subject to EPA approval. Please leave this field blank, or enter N/A in this field unless needed to identify two (or more) otherwise identical model types.

8. Relabeling: When relabeling vehicles for reasons specified 40 CFR 600.507-12(a) and 600.314-08(e)(4), please revise the original Index with the revised FE label information and also revise the release date to the effective date when the FE Label was revised. Please include in the model type comment field the reason for relabeling. Note that the provisions of 40 CFR 600.314-08 require that label values must not change for entire model year, except for the reasons outlined in the provisions of 600.507-12(a) and 600.314-08(e)(4).

9. Adjusted Combined Fuel Consumption (gallons/100 miles): Please enter the Manufacturer-Calculated Adjusted Combined Model Type Fuel Consumption (GL-214) in units of U.S. gallons per 100 miles, calculated according to the provisions of 600.311-12(c) as revised in the 2017 greenhouse gas final rule (page 77 FR 62624, October 15, 2012). For example, fuel consumption should be based on the rounded adjusted combined MPG label value (not the unrounded adjusted combined MPG value), calculated as follows:

Adjusted Combined Model Type Fuel Consumption = (100/rounded adjusted combined MPG label value). Please use the voluntarily lowered MPG label value, if applicable.

10. Voluntarily Lowering MPG Values and Increasing CO_2 Values: As outlined in the provisions of 40 CFR 600.210-12(a), "Manufacturers may voluntarily lower fuel economy

values and raise CO_2 values if they determine that the label values from any method are not representative of the fuel economy or CO_2 emissions for that model type." We encourage manufacturers to use these provisions as necessary, so that potential customers will be provided with accurate and representative fuel economy and CO_2 information for each vehicle.

10.1 Calculating Voluntarily Increased CO_2 Values: If manufacturers voluntarily lower city, highway or combined mpg values, then the provisions of 40 CFR 600.210-12(a) require that CO_2 values be increased accordingly. EPA calculates voluntarily increased city, highway and combined CO_2 values based on 1) the unrounded adjusted mpg value, 2) the unrounded adjusted CO2 value, and 3) the rounded, voluntarily lowered mpg value, as outlined in the following example:

Given:
unrounded adjusted combined mpg = 21.6949 mpg
unrounded adjusted combined CO_2 = 408.4 grams/mile
voluntarily lowered combined Label mpg = 20 mpg

Then: Voluntarily increased combined CO_2 = (21.6949 mpg x 408.4 gpm) / 20 mpg = 443.01 gpm; which rounds to 443 grams/mile CO_2.

Similar calculations are used to calculate voluntarily increased city and highway CO_2 values.

Note that in some cases, the adjusted combined CO_2 values may need to be increased even though the adjusted combined mpg value is not lowered, e.g. when a city mpg or highway mpg value is voluntarily lowered which (due to rounding) doesn't result in the adjusted combined mpg being lowered.

VW FOIA, EPA 06/20/2017 2017-FFP_014506

ENCLOSURE 3
to CD-14-15

Timetable for 2015 MY Printed Fuel Economy Guide

Task	Significant Dates	Responsible Party
1. Obtain an EPA Certificate which covers all model types to be included in the Guide.	August 14, 2014	Manufacturer
2. Enter general label fuel economy values and any other related information required by the Guide into EPA Verify database for all model types to be included in the Guide.	August 14, 2014	Manufacturer
3. Provide EPA **"placeholder"** descriptions (as outlined in Enclosure 2) for alternative fuel vehicles which will not be available until later in the model year.	August 14, 2014	Manufacturer
4. Compile a list from Verify with all necessary information for model types to be included in the Guide for each manufacturer; send the list to an individual manufacturer for data accuracy review.	August 15, 2014	EPA
5. Complete review of all information provided in "4" above, make necessary corrections in the Verify database and notify EPA that the data in Verify is complete and accurate.	August 27, 2014	Manufacturer
6. Send the complete Guide information to DOE for printing.	August 28, 2014	EPA
7. EPA announces 2015 Guide via a Press Release	early October, 2014	EPA

Comparable Class Fuel Economy Ranges

Task	Significant Dates	Responsible Party
1. Release the comparable class fuel economy ranges to be used on fuel economy labels to the manufacturers.	Previously provided in CD-13-14; will be updated in a November, 2014 guidance letter	EPA

EPA intends to include in the printed Guide, all available information which is submitted to EPA prior to August 28, 2014. August 27, 2014 is the last day for manufacturers to make changes to the EPA computer database.

VW FOIA, EPA 06/20/2017 2017-FFP_014507

To: Olechiw, Michael[olechiw.michael@epa.gov]; Passavant, Glenn[passavant.glenn@epa.gov]; Fernandez, Antonio[fernandez.antonio@epa.gov]; Wysor, Tad[wysor.tad@epa.gov]; Stout, Alan[stout.alan@epa.gov]; Good, David[good.david@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Laroo, Chris[laroo.chris@epa.gov]
From: Ex. 7
Sent: Mon 8/18/2014 7:17:29 PM
Subject: RE: USEAP/Volkswagen Meeting - Tier 3 Implementation
EPA Meeting Report Tier 3 Implementation July 16 2014 Draft.pdf
8_Carry-over-Examples_update1.pdf

To all:

Please see the e-mail from July 18, 2014 below. It distributed a draft meeting report from the July 16, 2014 USEPA/VW Group meeting on Tier 3 implementation.

Your reaction to our summary of the meeting would be appreciated. There were also a few open points that EPA was going to check. For the most part, the open points are contained in Agenda item 8 covering LEV III Certification and Carryover to Tier 3. Please see the bold-print items in the "Follow-Up Action" column of the report. I have attached copies of the report and the revised version of the carryover slides, distributed with my earlier e-mail, for your convenience.

We would appreciate your input so that we are able to close the open points.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone Ex. 7

Cell Ex. 7

E-Mail: Ex. 7

From: Ex. 7
Sent: Friday, July 18, 2014 11:26 AM
To: Michael Olechiw (Olechiw.Michael@epamail.epa.gov); Glenn Passavant/AA/USEPA/US (Passavant.Glenn@epamail.epa.gov); Antonio Fernandez/AA/USEPA/US (Fernandez.Antonio@epamail.epa.gov); wysor.tad@epa.gov; Alan Stout/AA/USEPA/US (Stout.Alan@epamail.epa.gov); David Good (Good.David@epamail.epa.gov); Snyder.jim@Epa.gov; Wright, DavidA (Wright.DavidA@epa.gov); 'Laroo.chris@Epa.gov'
Cc: Ex. 7

Ex. 7

Subject: USEAP/Volkswagen Meeting - Tier 3 Implementation

To all:

On July 16, 2014, representatives from the Volkswagen Group met with EPA staff to discuss topics related to the implementation of the Tier 3 requirements. Copies of the presentation materials were distributed by e-mail on July 15, 2014. Subsequent to the meeting, Volkswagen prepared a meeting report. It presents a brief discussion and conclusions drawn for each of the agenda topics. It also points out areas where further action is required and/or EPA confirmation is requested (specified in bold typeface).

We would particularly like to direct EPA's attention to Agenda Item 8, LEV III Certification and Carryover to Tier 3. A revised version of the slides for this item is attached. The revisions are shown in red. Slide 7 from the original deck addressed the topic of Tier 3 Evap. This is not included in the new deck since we agreed on the information presented and do not believe that further discussion is required. Slides 6 and 7 of the new deck address the topic of applicable test

procedures and carryover implications. The new Slide 7 presents Volkswagen's understanding of the EPA explanation from the meeting regarding the test procedures that apply to various vehicle concepts, assuming that the concepts are "carried over" through their lifespan. The test procedures referred to as Part 1066 Stage 1 and Stage 2, are as described on the new Slide 6. Slides 8 and 9 are included for reference.

Volkswagen appreciates the opportunity to meet with you, and looks forward to your comments on the report.

Best regards,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

E-Mail: Ex. 7

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: oliver.schmidt@vw.com[oliver.schmidt@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Mon 8/18/2014 7:53:44 PM
Subject: re: 2015 FE Guide - Data in EPA's database as of Aug 15, 2014 for your review; on Aug 28, 2014 I will send error free Verify data to DOE for the 2015 Printed Guide & the web
VW_Group_2015 FEGuide-all rel dates-no-sales-8-15-2014.xlsx

Richard,

re: 2015 FE Guide - Data EPA's database as of Aug 15, 2014 for your review; on Aug 28, 2014 I will send error free Verify data to DOE for the 2015 Printed Guide & the web

Attached are the data in Verify as of August 15, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2015 Printed Guide.

Printed Guide – For the 2015 Printed Guide, I will send all error-free data in Verify to DOE on August 28, 2014, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 17, 2014, when 2015 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions. Please email me if there are data in Verify which you do not want included in the 2015 Printed Guide.

Web Update - The next normal posting of 2015 FE Label data for www.fueleconomy.gov will be on August 28, 2013 to coincide with the schedule for the 2015 Printed Guide. On that day, I'll send all the error-free data in Verify (which is releasable) to DOE to update www.fueleconomy.gov, business-as-usual.

Reminders:

- Please double check the attached data in Verify for errors, missing labels, etc.
- Please send me a short email when you think the 2015 FE Label data is "good to go."
- August 27, 2014 is the last day to make changes for the 2015 Printed Guide.
- If you enter new label data into Verify before Aug 28, 2014, please double check it carefully for accuracy.

•□□□□□□□□ Don’t forget to send me the placeholders for the 2015 Printed Guide in an Excel spreadsheet as soon as possible.

Please make any needed corrections to Verify when you get a chance.

Thanks

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2015 Volkswage	Audi	A3	VGA	7	1.8	4
Diesel;		2015 Volkswage	Audi	A3	VGA	101	2.0	4
		2015 Volkswage	Audi	A3 Cabriol	VGA	6	1.8	4
		2015 Volkswage	Audi	A3 Cabriol	VGA	5	2.0	4
		2015 Volkswage	Audi	A3 quattro	VGA	4	2.0	4
		2015 Volkswage	Audi	A4	VGA	46	2.0	4
Relabeled. Please include in mo		2015 Volkswage	Audi	A4 quattro	VGA	64	2.0	4
		2015 Volkswage	Audi	A4 quattro	VGA	49	2.0	4
		2015 Volkswage	Audi	A5 Cabriol	VGA	66	2.0	4
Relabeled. Please include in mo		2015 Volkswage	Audi	A5 quattro	VGA	65	2.0	4
		2015 Volkswage	Audi	A5 quattro	VGA	50	2.0	4
		2015 Volkswage	Audi	A6	VGA	47	2.0	4
		2015 Volkswage	Audi	A6 quattro	VGA	48	2.0	4
		2015 Volkswage	Audi	A6 quattro	VGA	72	3.0	6
Diesel;		2015 Volkswage	Audi	A6 quattro	VGA	17	3.0	6
		2015 Volkswage	Audi	A7 quattro	VGA	71	3.0	6
Diesel;		2015 Volkswage	Audi	A7 quattro	VGA	18	3.0	6
		2015 Volkswage	Audi	A8	VGA	40	3.0	6
		2015 Volkswage	Audi	A8	VGA	11	4.0	8
Diesel;		2015 Volkswage	Audi	A8L	VGA	15	3.0	6
		2015 Volkswage	Audi	A8L	VGA	41	3.0	6
		2015 Volkswage	Audi	A8L	VGA	10	4.0	8
		2015 Volkswage	Audi	A8L	VGA	14	6.3	12
		2015 Volkswage	Audi	allroad qu	VGA	68	2.0	4
		2015 Volkswage	Audi	Q3	VGA	62	2.0	4
		2015 Volkswage	Audi	Q3 quattro	VGA	37	2.0	4
		2015 Volkswage	Audi	Q5	VGA	67	2.0	4
		2015 Volkswage	Audi	Q5	VGA	70	3.0	6
Diesel;		2015 Volkswage	Audi	Q5	VGA	16	3.0	6
Hybrid;		2015 Volkswage	Audi	Q5 Hybrid	VGA	63	2.0	4
Diesel;		2015 Volkswage	Audi	Q7	VGA	12	3.0	6
		2015 Volkswage	Audi	Q7	VGA	51	3.0	6
		2015 Volkswage	Audi	R8	VGA	27	4.2	8
		2015 Volkswage	Audi	R8	VGA	29	4.2	8
		2015 Volkswage	Audi	R8	VGA	35	5.2	10
		2015 Volkswage	Audi	R8	VGA	33	5.2	10
		2015 Volkswage	Audi	R8 Spyder	VGA	26	4.2	8
		2015 Volkswage	Audi	R8 Spyder	VGA	28	4.2	8
		2015 Volkswage	Audi	R8 Spyder	VGA	34	5.2	10
		2015 Volkswage	Audi	R8 Spyder	VGA	32	5.2	10
		2015 Volkswage	Audi	RS5	VGA	30	4.2	8
		2015 Volkswage	Audi	RS5 Cabrio	VGA	31	4.2	8
Relabeled. Please include in mo		2015 Volkswage	Audi	RS7	VGA	21	4.0	8
		2015 Volkswage	Audi	S3	VGA	42	2.0	4

	2015	Volkswage	Audi	S4	VGA	73	3.0	6
	2015	Volkswage	Audi	S4	VGA	76	3.0	6
	2015	Volkswage	Audi	S5	VGA	74	3.0	6
	2015	Volkswage	Audi	S5	VGA	77	3.0	6
	2015	Volkswage	Audi	S5 Cabriole	VGA	75	3.0	6
	2015	Volkswage	Audi	S6	VGA	20	4.0	8
	2015	Volkswage	Audi	S7	VGA	19	4.0	8
	2015	Volkswage	Audi	S8	VGA	9	4.0	8
	2015	Volkswage	Audi	SQ5	VGA	69	3.0	6
	2015	Volkswage	Audi	TT Coupe c	VGA	2	2.0	4
	2015	Volkswage	Audi	TT Roadste	VGA	3	2.0	4
	2015	Volkswage	Bentley	Continenta	VGA	24	4.0	8
	2015	Volkswage	Bentley	Continenta	VGA	43	6.0	12
	2015	Volkswage	Bentley	Continenta	VGA	22	4.0	8
	2015	Volkswage	Bentley	Continenta	VGA	45	6.0	12
	2015	Volkswage	Bentley	Flying Spur	VGA	23	4.0	8
	2015	Volkswage	Bentley	Flying Spur	VGA	44	6.0	12
	2015	Volkswage	Bentley	Mulsanne	VGA	61	6.8	8
	2015	Volkswage	Bugatti	Veyron	VGA	60	8.0	16
	2015	Volkswage	Lamborghi	Aventador	VGA	52	6.5	12
	2015	Volkswage	Lamborghi	Aventador	VGA	53	6.5	12
	2015	Volkswage	Lamborghi	Huracan	VGA	25	5.2	10
	2015	Volkswage	Lamborghi	Veneno Rc	VGA	54	6.5	12
	2015	Volkswage	Volkswage	Beetle	VGA	79	1.8	4
	2015	Volkswage	Volkswage	Beetle	VGA	78	1.8	4
	2015	Volkswage	Volkswage	Beetle	VGA	81	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle	VGA	95	2.0	4
	2015	Volkswage	Volkswage	Beetle	VGA	83	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle	VGA	91	2.0	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	80	1.8	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	82	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle Con	VGA	96	2.0	4
	2015	Volkswage	Volkswage	Beetle Con	VGA	84	2.0	4
Diesel;	2015	Volkswage	Volkswage	Beetle Con	VGA	92	2.0	4
	2015	Volkswage	Volkswage	CC	VGA	58	2.0	4
	2015	Volkswage	Volkswage	CC	VGA	59	2.0	4
	2015	Volkswage	Volkswage	CC 4Motio	VGA	56	3.6	6
	2015	Volkswage	Volkswage	Eos	VGA	36	2.0	4
	2015	Volkswage	Volkswage	Golf	VGA	103	1.8	4
	2015	Volkswage	Volkswage	Golf	VGA	85	1.8	4
Diesel;	2015	Volkswage	Volkswage	Golf	VGA	100	2.0	4
Diesel; Relabeled. Please include	2015	Volkswage	Volkswage	Golf	VGA	104	2.0	4
	2015	Volkswage	Volkswage	GTI	VGA	1	2.0	4
	2015	Volkswage	Volkswage	GTI	VGA	8	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	98	1.8	4

	2015	Volkswage	Volkswage	Jetta	VGA	97	1.8	4
	2015	Volkswage	Volkswage	Jetta	VGA	93	2.0	4
Diesel;	2015	Volkswage	Volkswage	Jetta	VGA	102	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	99	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	86	2.0	4
Diesel;	2015	Volkswage	Volkswage	Jetta	VGA	105	2.0	4
	2015	Volkswage	Volkswage	Jetta	VGA	94	2.0	4
	2015	Volkswage	Volkswage	Passat	VGA	90	1.8	4
	2015	Volkswage	Volkswage	Passat	VGA	88	1.8	4
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	89	2.0	4
Diesel;	2015	Volkswage	Volkswage	Passat	VGA	87	2.0	4
	2015	Volkswage	Volkswage	Passat	VGA	55	3.6	6
	2015	Volkswage	Volkswage	Tiguan	VGA	39	2.0	4
	2015	Volkswage	Volkswage	Tiguan 4M	VGA	38	2.0	4
Diesel;	2015	Volkswage	Volkswage	Touareg	VGA	13	3.0	6
	2015	Volkswage	Volkswage	Touareg	VGA	57	3.6	6
Hybrid;	2015	Volkswage	Volkswage	Touareg H	VGA	106	3.0	6

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	23	33	27				28.9000	46.6000	34.8580
Auto(AM-S	31	43	36				41.0359	61.6186	48.2955
Auto(AM-S	24	35	28				30.5000	47.0000	36.2224
Auto(AM-S	23	32	26				29.0000	44.2000	34.3094
Auto(AM-S	24	33	27				30.0000	44.6000	35.1828
Auto(AV-S	24	32	27				30.3000	44.6000	35.4089
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M	22	32	26				27.5555	43.9180	33.1059
Auto(S8)	20	28	23				25.1000	39.6000	30.0517
Auto(S8)	21	30	25				27.1000	42.2000	32.3011
Manual(M	22	32	26				27.5555	43.9180	33.1059
Auto(AV-S	25	33	28				31.4000	46.9000	36.8857
Auto(S8)	20	29	23				24.8000	40.5000	30.0404
Auto(S8)	18	27	22				23.1369	38.1000	28.1037
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	18	28	21				23.0447	37.6000	27.9059
Auto(S8)	24	38	29				30.6987	52.4000	37.7304
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	30	22				22.5929	39.4000	27.9601
Auto(S8)	24	36	28				29.9399	51.4000	36.8664
Auto(S8)	19	29	22				23.5657	39.6000	28.8162
Auto(S8)	18	29	22				22.2780	39.1000	27.6266
Auto(S8)	14	22	17				17.2000	28.6000	20.9595
Auto(S8)	21	28	24				26.7000	39.2000	31.1732
Auto(S6)	20	29	23				24.8499	40.0000	29.9555
Auto(S6)	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	28	23				24.8000	38.6000	29.5548
Auto(S8)	18	26	21				22.8446	35.5000	27.2096
Auto(S8)	24	31	27				29.1832	43.5000	34.2568
Auto(S8)	24	30	26				30.4000	39.9000	34.0480
Auto(S8)	19	28	22				22.8000	39.1000	28.0649
Auto(S8)	16	22	18				19.4000	30.0000	23.0678
Auto(AM-S	14	23	17				16.4549	29.7195	20.5904
Manual(M	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S	13	22	16				15.4000	28.8067	19.4796
Manual(M	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S	14	23	17				16.4549	29.7195	20.5904
Manual(M	11	20	14				13.6544	24.3877	17.0265
Auto(AM-S	13	22	16				15.4000	28.8067	19.4796
Manual(M	12	19	14				13.7000	23.4475	16.8527
Auto(AM-S	16	23	18				19.1000	30.0000	22.8332
Auto(AM-S	16	22	18				19.2000	28.9000	22.6159
Auto(S8)	15	25	18				17.8763	33.1739	22.5584
Auto(AM-S	23	31	26				28.5000	41.5000	33.1767

vided [s [600.314-08 states label values must not change for entire model year, except for 600.507(a) and 600.314-0
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Auto(AM-S	18	28	21	22.4000	35.8000	26.9372
Manual(M	17	26	20	20.0000	33.4000	24.4063
Auto(AM-S	18	28	21	22.4000	35.8000	26.9372
Manual(M	17	26	20	20.0000	33.4000	24.4063
Auto(AM-S	18	26	21	22.1000	34.7000	26.4165
Auto(AM-S	17	27	20	20.7366	35.2072	25.4423
Auto(AM-S	17	27	20	20.7366	35.2072	25.4423
Auto(S8)	17	27	20	19.9000	36.4000	24.9995
Auto(S8)	17	24	19	20.8000	32.9000	24.9252
Auto(AM-S	22	31	26	28.3669	42.1911	33.2728
Auto(AM-S	22	31	26	28.3669	42.1911	33.2728
Auto(S8)	15	25	19	19.1000	33.5000	23.6806
Auto(S8)	12	21	15	15.4000	28.3000	19.3741
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	14	24	17	17.3000	31.8000	21.7662
Auto(S8)	12	20	15	14.4000	26.7000	18.1658
Auto(S8)	11	18	13	12.9000	21.8000	15.8033
Auto(AM-S	8	15	10	10.0000	17.9000	12.4782
Auto(AM-S	11	18	13	12.6000	25.2000	16.2581
Auto(AM-S	10	16	12	11.5000	21.2000	14.4817
Auto(AM-S	14	20	16	16.8000	25.5000	19.8471
Auto(AM-S	11	17	13	12.5000	22.7000	15.6681
Auto(S6)	25	33	28	31.8064	46.0926	36.9616
Manual(M	24	33	27	30.3689	46.0618	35.8679
Auto(AM-S	24	30	26	29.1689	42.3558	33.9213
Auto(AM-S	31	41	34	40.2000	57.8000	46.5830
Manual(M	23	31	26	27.7589	43.4112	33.1352
Manual(M	31	41	34	40.0000	57.8000	46.4350
Auto(S6)	24	32	27	30.6903	45.4713	35.9488
Auto(AM-S	23	29	25	28.8902	40.8000	33.2591
Auto(AM-S	30	40	34	39.7000	56.5000	45.8327
Manual(M	23	31	26	27.7589	43.4112	33.1352
Manual(M	30	40	34	38.7000	57.2000	45.2919
Auto(AM-S	22	31	25	26.9290	42.1849	32.1632
Manual(M	21	32	25	25.6435	43.4548	31.4431
Auto(S6)	17	25	20	20.5000	33.5000	24.8373
Auto(AM-S	22	30	25	27.5000	41.5000	32.4219
Auto(S6)	25	36	29	32.5000	51.1000	38.8661
Manual(M	25	37	30	32.6000	52.5000	39.3042
Auto(AM-S	31	43	36	41.0359	61.6186	48.2955
Manual(M	30	45	36	39.9000	64.5000	48.1668
Auto(AM-S	25	33	28	30.7000	45.3000	35.9078
Manual(M	25	34	28	30.0000	46.4000	35.6740
Auto(S6)	25	37	30	32.7401	52.6000	39.4414

dy provided). [600.314-08 states label values must not change for entire model year except for 600.507(a) and 600

Manual(M	25	37	29	32.3787	52.4790	39.1216
Auto(AM-S	24	32	27	29.5595	44.4600	34.8093
Auto(AM-S	31	45	36	41.3000	64.1000	49.1703
Auto(S6)	23	34	26	28.7000	47.5000	34.9193
Manual(M	25	34	28	29.3000	49.6000	35.9145
Manual(M	31	46	36	40.2000	65.6000	48.6823
Manual(M	23	33	26	28.2801	45.1600	33.9987
Auto(S6)	24	36	28	31.2000	50.5769	37.6995
Manual(M	24	35	28	30.9734	49.8831	37.3437
Auto(AM-S	30	42	34	38.7000	59.9000	46.0312
Manual(M	30	44	35	39.0000	62.4000	46.9173
Auto(AM-S	20	28	23	23.9000	37.3000	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7711	36.0238	29.5565
Auto(S8)	20	29	23	24.1000	41.0000	29.5883
Auto(S8)	17	23	19	21.3000	31.6000	24.9612
Auto(S8)	20	24	21	25.1000	33.1000	28.1631

[illegible] Fuel	City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
	23.4556	33.3421	27.0673		TC	Turbochar	AMS	Automatec		6
	31.1996	43.0359	35.6064		TC	Turbochar	AMS	Automatec		6
	24.3444	34.5845	28.0867		TC	Turbochar	AMS	Automatec		6
	23.3120	31.5429	26.4136		TC	Turbochar	AMS	Automatec		6
	24.0818	32.6198	27.2970		TC	Turbochar	AMS	Automatec		6
	23.6858	31.6788	26.7189		TC	Turbochar	SCV	Selectable		8
	21.5584	30.0427	24.5522		TC	Turbochar	SA	Semi-Auto		8
	22.1972	32.0693	25.7665		TC	Turbochar	M	Manual		6
	19.8843	28.2637	22.9455		TC	Turbochar	SA	Semi-Auto		8
	21.5584	30.0427	24.5522		TC	Turbochar	SA	Semi-Auto		8
	22.1972	32.0693	25.7665		TC	Turbochar	M	Manual		6
	24.5044	32.5529	27.5721		TC	Turbochar	SCV	Selectable		8
	19.6106	28.8603	22.9156		TC	Turbochar	SA	Semi-Auto		8
	18.3949	27.2332	21.5408		SC	Supercha	SA	Semi-Auto		8
	24.4094	38.0485	29.1042		TC	Turbochar	SA	Semi-Auto		8
	18.0028	27.5267	21.3226		SC	Supercha	SA	Semi-Auto		8
	24.4094	38.0485	29.1042		TC	Turbochar	SA	Semi-Auto		8
	18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Auto		8
	18.2315	29.5343	22.0244		TC	Turbochar	SA	Semi-Auto		8
	23.8727	36.3252	28.2271		TC	Turbochar	SA	Semi-Auto		8
	18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Auto		8
	17.9485	28.5015	21.5369		TC	Turbochar	SA	Semi-Auto		8
	13.8358	21.9706	16.6020	G	NA	Naturally A	SA	Semi-Auto		8
	21.0646	27.9892	23.7037		TC	Turbochar	SA	Semi-Auto		8
	19.6619	28.5380	22.8617		TC	Turbochar	SA	Semi-Auto		6
	19.7028	28.0105	22.7375		TC	Turbochar	SA	Semi-Auto		6
	19.6619	27.5771	22.5781		TC	Turbochar	SA	Semi-Auto		8
	17.8443	25.5746	20.6536		SC	Supercha	SA	Semi-Auto		8
	23.6266	31.3636	26.5783		TC	Turbochar	SA	Semi-Auto		8
	24.0075	29.7936	26.3065		TC	Turbochar	SA	Semi-Auto		8
	18.7400	27.6200	21.9099		TC	Turbochar	SA	Semi-Auto		8
	15.5983	21.6157	17.8322		SC	Supercha	SA	Semi-Auto		8
	13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec		7
	11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual		6
	12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec		7
	11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual		6
	13.5631	22.5823	16.5348	G	NA	Naturally A	AMS	Automatec		7
	11.4565	20.0560	14.1955	G	NA	Naturally A	M	Manual		6
	12.9942	22.2057	15.9766	G	NA	Naturally A	AMS	Automatec		7
	11.7338	19.4192	14.2763	G	NA	Naturally A	M	Manual		6
	15.7409	23.3075	18.4339		NA	Naturally A	AMS	Automatec		7
	15.8793	22.1836	18.2078		NA	Naturally A	AMS	Automatec		7
	14.5210	25.1577	17.9525		TC	Turbochar	SA	Semi-Auto		8
	23.1833	30.7065	26.0560		TC	Turbochar	AMS	Automatec		6

8(e)(4) reasons: Please revise release date to the effective date when vehicles were relabelled;

8(e)(4) reasons: Please revise release date to the effective date when vehicles were relabelled;

8(e)(4) reasons: Please revise release date to the effective date when vehicles were relabelled;

18.1170	27.5580	21.4190	SC	Supercharg	AMS	Automatec	7
17.0438	26.0230	20.1767	SC	Supercharg	M	Manual	6
18.1170	27.5580	21.4190	SC	Supercharg	AMS	Automatec	7
17.0438	26.0230	20.1767	SC	Supercharg	M	Manual	6
17.6699	25.9530	20.6333	SC	Supercharg	AMS	Automatec	7
16.7533	26.9042	20.1794	TC	Turbochar	AMS	Automatec	7
16.7533	26.9042	20.1794	TC	Turbochar	AMS	Automatec	7
16.5369	26.7008	19.9551	TC	Turbochar	SA	Semi-Auto	8
16.7285	23.6581	19.2682	SC	Supercharg	SA	Semi-Auto	8
22.3665	31.1759	25.6242	TC	Turbochar	AMS	Automatec	6
22.3665	31.1759	25.6242	TC	Turbochar	AMS	Automatec	6
15.2087	25.3816	18.5553	TC	Turbochar	SA	Semi-Auto	8
12.4737	21.0866	15.2827	G	TC	Turbochar	SA	Semi-Auto	8
13.8190	23.8488	17.0447	G	TC	Turbochar	SA	Semi-Auto	8
12.0228	20.0478	14.6643	G	TC	Turbochar	SA	Semi-Auto	8
13.8190	23.8488	17.0447	G	TC	Turbochar	SA	Semi-Auto	8
12.0228	20.0478	14.6643	G	TC	Turbochar	SA	Semi-Auto	8
10.5402	17.7129	12.8889	G	TC	Turbochar	SA	Semi-Auto	8
8.4232	14.7698	10.4424	G	TC	Turbochar	AMS	Automatec	7
10.6055	18.4729	13.1199	G	NA	Naturally A	AMS	Automatec	7
9.7957	16.2453	11.9264	G	NA	Naturally A	AMS	Automatec	7
14.0224	20.0427	16.2140	G	NA	Naturally A	AMS	Automatec	7
10.6353	16.9743	12.7836	G	NA	Naturally A	AMS	Automated	7
24.7637	32.6943	27.7980	TC	Turbochar	SA	Semi-Auto	6
23.7579	32.6943	27.0899	TC	Turbochar	M	Manual	5
23.6856	29.5929	26.0232	TC	Turbochar	AMS	Automatec	6
30.6516	40.5292	34.4273	TC	Turbochar	AMS	Automatec	6
22.6980	30.6082	25.6850	TC	Turbochar	M	Manual	6
30.5143	40.5292	34.3319	TC	Turbochar	M	Manual	6
23.9740	32.2876	27.1159	TC	Turbochar	SA	Semi-Auto	6
22.7135	28.5529	25.0157	TC	Turbochar	AMS	Automatec	6
30.3081	39.6674	33.9083	TC	Turbochar	AMS	Automatec	6
22.6980	30.6082	25.6850	TC	Turbochar	M	Manual	6
29.6183	40.1317	33.5766	TC	Turbochar	M	Manual	6
21.8993	30.8310	25.1821	TC	Turbochar	AMS	Automatec	6
20.6665	31.8238	24.5378	TC	Turbochar	M	Manual	6
16.9415	25.2190	19.8774	NA	Naturally A	SA	Semi-Auto	6
21.7634	30.1121	24.8658	TC	Turbochar	AMS	Automatec	6
25.2640	36.0643	29.1989	TC	Turbochar	SA	Semi-Auto	6
25.3353	37.0021	29.5244	TC	Turbochar	M	Manual	5
31.1996	43.0359	35.6064	TC	Turbochar	AMS	Automatec	6
30.4450	44.9307	35.6137	TC	Turbochar	M	Manual	6
24.6434	32.6158	27.6891	TC	Turbochar	AMS	Automatec	6
24.9095	34.2917	28.4070	TC	Turbochar	M	Manual	6
25.4066	37.0689	29.5967	TC	Turbochar	SA	Semi-Auto	6

.31.08(s)(4) reasons.] Please revise release date to the effective date when vehicles were relabelled;

25.1926	37.0021	29.4176	TC	Turbochar¡M	Manual	5
23.5744	31.8670	26.7012	TC	Turbochar¡AMS	Automatec	6
31.4045	44.6752	36.2501	TC	Turbochar¡AMS	Automatec	6
22.5269	33.6412	26.4608	NA	Naturally ASA	Semi-Auto	6
24.6629	33.9684	28.1307	NA	Naturally AM	Manual	5
30.6516	45.6549	35.9711	TC	Turbochar¡M	Manual	6
22.8950	32.6159	26.4413	TC	Turbochar¡M	Manual	6
24.3335	35.7288	28.4112	TC	Turbochar¡SA	Semi-Auto	6
24.1899	35.2585	28.1693	TC	Turbochar¡M	Manual	5
29.6183	41.9168	34.1237	TC	Turbochar¡AMS	Automatec	6
29.8256	43.5614	34.7575	TC	Turbochar¡M	Manual	6
19.7174	27.8048	22.6868	NA	Naturally AAMS	Automatec	6
20.5496	25.7855	22.6161	TC	Turbochar¡SA	Semi-Auto	6
20.3807	25.8019	22.5089	TC	Turbochar¡SA	Semi-Auto	6
19.6490	28.9961	22.9829	TC	Turbochar¡SA	Semi-Auto	8
17.0411	22.7325	19.2048	NA	Naturally ASA	Semi-Auto	8
19.8843	23.7762	21.4655	SC	Supercha¡SA	Semi-Auto	8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.0	VAL	20		DU	Diesel, ultr
tomated Ma	nual with	paddles)	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
MT with pad	dles)	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		422	GP	Gasoline (F
N	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		389	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		422	GP	Gasoline (F
N	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
MT with pad	dles)	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAV03.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV04.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAV03.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV04.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV06.3	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		406	GP	Gasoline (F
Y	N	F	2-Wheel D	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	85		455	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAT02.(	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAT03.0	NU3	5		DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAT03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
N	N	A	All Wheel I	FVGAV05.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV04.2	15			GP	Gasoline (F
Y	N	A	All Wheel I	FVGAV04.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel I	FVGAV02.(	15			GP	Gasoline (F

tomated Manual with paddles)	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
N	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
N	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAJ03.0	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV02.(	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV02.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	A	All Wheel IFVGAV04.(	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV06.(	85	357	GP	Gasoline (F
Y	N	R	2-Wheel DFVGAV06.8	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV08.(	15		GPR	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV06.5	15		GPR	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV06.5	15		GPR	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV05.2	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IFVGAV06.	15		GPR	Gasoline (I
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
tomated Manual with paddles)	N	F	2-Wheel DFVGAJ02.0	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IFVGAV03.(	15		GP	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
N	N	F	2-Wheel DFVGAV02.0VAL		20	DU	Diesel, ultr
tomated Manual with paddles)	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DFVGAV02.(	15		GP	Gasoline (F
Y	N	F	2-Wheel DFVGAV02.(	15		G	Gasoline (F

N	N	F	2-Wheel D	FVGAV02.(	10	G	Gasoline (F
Y	N	Manual with	paddles)	2-Wheel D	FVGAV02.(	15	GP	Gasoline (F
Y	N	Manual with	paddles)	2-Wheel D	FVGAV02.0VAL	20	DU	Diesel, ultr
Y	N	F	2-Wheel D	FVGAV02.(	15	G	Gasoline (F
N	N	F	2-Wheel D	FVGAV02.(	15	G	Gasoline (F
N	N	F	2-Wheel D	FVGAV02.0VAL	20	DU	Diesel, ultr
N	N	F	2-Wheel D	FVGAV02.(	15	GP	Gasoline (F
Y	N	F	2-Wheel D	FVGAV02.(	15	G	Gasoline (F
N	N	F	2-Wheel D	FVGAV02.(	15	G	Gasoline (F
Y	N	Manual with	paddles)	2-Wheel D	FVGAV02.0VAL	20	DU	Diesel, ultr
N	N	F	2-Wheel D	FVGAV02.0VAL	20	DU	Diesel, ultr
Y	N	Manual with	paddles)	2-Wheel D	FVGAV03.(	15	GP	Gasoline (F
Y	N	F	2-Wheel D	FVGAJ02.0	10	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAJ02.0	15	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAT03.0NU2	5	DU	Diesel, ultr
Y	N	A	All Wheel I	FVGAT03.(	15	GP	Gasoline (F
Y	N	A	All Wheel I	FVGAT03.(	15	GP	Gasoline (F

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	miles per ga	Unleaded Recommended)	Not exempt			86	12		
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt			86	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt	79	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt	79	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt			86	10		
MPG	miles per ga	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per ga	Unleaded Recommended)	Not exempt	81	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt	84	12				
MPG	miles per ga	Unleaded Recommended)	Not exempt	84	12				
MPG	miles per ga	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per ga	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per ga	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt			98	16		
MPG	miles per ga	Unleaded Recommended)	Not exempt					94	25
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt					94	25
MPG	miles per ga	Unleaded Recommended)	Not exempt			100	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			100	15		
MPG	miles per ga	ulfur (15 ppm maximum)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per ga	Unleaded Recommended)	Not exempt			90	28		
MPG	miles per ga	Unleaded Recommended)	Not exempt					84	17
MPG	miles per ga	Unleaded Recommended)	Not exempt					84	17
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	ulfur (15 ppm maximum)	Truck						
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	ulfur (15 ppm maximum)	Truck						
MPG	miles per ga	Unleaded Recommended)	Truck						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt						
MPG	miles per ga	Unleaded Recommended)	Not exempt	84	13				
MPG	miles per ga	Unleaded Recommended)	Not exempt	81	10				
MPG	miles per ga	Unleaded Recommended)	Not exempt					94	25
MPG	miles per ga	Unleaded Recommended)	Not exempt			86	10		

Unleaded Recommended)	MPG	miles per gal	Not exempt			90	13	
Unleaded Recommended)	MPG	miles per gal	Not exempt			90	13	
Unleaded Recommended)	MPG	miles per gal	Not exempt	84	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt	84	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	10			
Unleaded Recommended)	MPG	miles per gal	Not exempt			98	16	
Unleaded Recommended)	MPG	miles per gal	Not exempt					94 25
Unleaded Recommended)	MPG	miles per gal	Not exempt			100	15	
Unleaded Recommended)	MPG	miles per gal	Truck					
Unleaded Recommended)	MPG	miles per gal	Not exempt	74	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt					
Unleaded Recommended)	MPG	miles per gal	Not exempt	89	11			
Unleaded Recommended)	MPG	miles per gal	Not exempt	89	11			
Unleaded Recommended)	MPG	miles per gal	Not exempt	86	7			
Unleaded Recommended)	MPG	miles per gal	Not exempt	86	7			
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt			101	11	
Unleaded Required)	MPG	miles per gal	Not exempt					
Unleaded Required)	MPG	miles per gal	Not exempt					
Unleaded Required)	MPG	miles per gal	Not exempt					
Unleaded Recommended)	MPG	miles per gal	Not exempt					
Unleaded Required)	MPG	miles per gal	Not exempt					
Unleaded Recommended)	MPG	miles per gal	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gal	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gal	Not exempt					85 15
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gal	Not exempt					85 15
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt					85 15
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	7			
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	7			
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gal	Not exempt	77	11			
Unleaded Recommended)	MPG	miles per gal	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gal	Not exempt					93 16
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt					93 16
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gal	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gal	Not exempt					93 16
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16	

Unleaded Recommended)	MPG	miles per gal	Not exempt	94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	16
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt	94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	16
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt	94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	16
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt	102	16
ulfur (15 ppm maximum)	MPG	miles per gal	Not exempt	102	16
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	16
Unleaded Recommended)	MPG	miles per gal	Truck		
Unleaded Recommended)	MPG	miles per gal	Truck		
ulfur (15 ppm maximum)	MPG	miles per gal	Truck		
Unleaded Recommended)	MPG	miles per gal	Truck		
Unleaded Recommended)	MPG	miles per gal	Truck		

Annual Fu	EPA Calcu	Comment	City2 FE (U	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2100	2100	corrected fuel unit price, engine configuration number changed to #1 for 1.8L engine code CN							
1550	1550	hwy label value correction							
2050	2050	refresh release date, corrected interior volumes, fuel unit price correction, engine configurati							
2200	2200	refreshed release date, interior volume corrected, engine configuration changed to #2 for 2.0							
2100	2100	carline interior volumes corrected from 2 door to 4 door, engine configuration number chang							
2100	2100								
2300	2300	manuf con	15	22	18			19.5	
2200	2200								
2500	2500	eng code c	14	20	16			17.4	
2300	2300	manuf con	15	22	18			19.5	
2200	2200								
2050	2050								
2500	2500								
2600	2600								
1950	1950								
2700	2700								
1950	1950								
2600	2600								
2600	2600								
2000	2000								
2600	2600								
2600	2600	FUEL AND GHG RATING CORRECTED TO 5							
3350	3350	5-yr fuel cost corrected							
2400	2400	manuf con	15	21	17			19.2	
2500	2500	Corrected CO2 typos, corrected round error for highway rounded adjusted CO2 value							
2500	2500	Eng division correction							
2500	2500		14	19	16			17.4	
2700	2700	5yr fuel cost corrected							
2100	2100	Corrected unrounded unadjusted highway and combined CO2 values							
2200	2200	corrected stop/start indicator, zero set for 5-yr fuel saved instead of zero for spending							
2550	2550								
3150	3150	corrected highway CO2 adj value							
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3350	3350								
4050	4050								
3550	3550								
4050	4050								
3150	3150								
3150	3150								
3150	3150	Relabel, 50/50 weighting of best and worse (D&S) testing							
2200	2200	5yr fuel savings set to zero instead of spending							

2700	2700				
2850	2850				
2700	2700				
2850	2850				
2700	2700				
2850	2850	maximum ethanol corrected			
2850	2850	maximum ethanol corrected			
2850	2850	S/S indicator to yes, back to NO.			
3000	3000				
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
2200	2200	changed engine configuration number after Verify reassigned numbers on CSI after addition o			
3000	3000	release date change to March			
3800	3800	9	15	11	10.5
3350	3350	data substitution corrected to no for eng code CYCA, release date change to March			
3800	3800	9	15	11	10.5
3350	3350	release date change to March			
3800	3800	9	15	11	10.5
4400	4400				
5700	5700	eng code correction			
4400	4400				
4750	4750				
3550	3550	Release date change			
4400	4400	corrected carline to Veneno Roadster 477			
1900	1900				
1950	1950	corrected combined unrounded unadj value			
2200	2200	corrected combined unadjusted unrounded value type			
1650	1650				
2200	2200				
1650	1650	corrected max Bio-Diesel to 20			
1950	1950				
2300	2300				
1650	1650				
2200	2200				
1650	1650				
2300	2300				
2300	2300				
2850	2850				
2300	2300				
1800	1800				
1750	1750				
1550	1550	hwy label value corrected			
1550	1550	relabel with EPA confirmatory tests			
2050	2050	SMOG corrected to 9 as this is a nationwide Tier 2 BIN 2 and Calif PZEV			
2050	2050				
1750	1750				

1800	1800 fuel consumption and CO2 unadj unrounded corrected
2100	2100 5 yr fuel savings corrected
1550	1550 release date change
2000	2000
1900	1900
1550	1550
2200	2200
1900	1900 rounded adjusted highway CO2 rounding error corrected
1900	1900
1650	1650 EPA confirmatory tests numbers for city highway US06 now included, no label value changes,
1600	1600 corrected CO2 values and annual fuel cost corrected
2500	2500
2500	2500
2500	2500
2450	2450 corrected fuel economy rating to 5
3000	3000
2700	2700 S/S set to yes

Hwy2 Unr	Comb2 Unr	Hwy2 Unr	Comb2 Unr	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
SB.								
on changed to #1 for 1.8L engine code CNSB								
L engine code CNTC.								
ed to #2 for 2.0L engine code CNTC, GHG rating corrected								
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E	MPG miles per g
28.2	21.0231	13.7843	20.1263	16.0619	270	E	Ethanol (E	MPG miles per g
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E	MPG miles per g
28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E	MPG miles per g
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E	MPG miles per g

f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f
f a model running change, this label includes two engine configuration numbers: #2 for engine code CETA and # 4 f

20.8	13.5107	8.8115	15.1054	10.8449	262	E	Ethanol (E	MPG miles per g
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E	MPG miles per g
20.5	13.4531	8.6127	14.7094	10.5874	262	E	Ethanol (E	MPG miles per g

EPA reprocessed their confirmatory city and highway tests - corrected unrounded MPG results entered

Alternative Fuel Fuel2 AltmCity CO2	Hwy CO2	Comb CO2	Fuel2 EPA	Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	23		Subcompa
					2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	24		Compact C
2600	400	281	347	2600	SIDI; Unde	2	24	Compact C
				SIDI;	2	24		Compact C
2900	448	308	385	2900	SIDI; FFV;	2	23	Subcompa
2600	400	281	347	2600	SIDI; Unde	2	23	Subcompa
				SIDI;	2	23		Subcompa
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
				SIDI;	2	25		Midsize Ca
					2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
				SIDI;	2	26		Large Cars
2750	406	300	358	2750	SIDI; FFV;	2	27	Small Stati
				SIDI;	2	24		Compact C
				SIDI;	2	24		Compact C
2900	450	320	392	2900	SIDI; FFV;	2	231	Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	231		Small SUV 4WD
				SIDI;	2	231		Small SUV 4WD
					2	233		Standard SUV 4W
				SIDI;	2	233		Standard SUV 4W
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	21		Two Seate
				SIDI;	2	23		Subcompa
				SIDI;	2	23		Subcompa
				SIDI; Unde	2	25		Midsize Ca
				SIDI;	2	23		Subcompa

					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	25	Midsize Ca
					SIDI;	2	231	Small SUV 4WD
or engine code CDMA and all TT models.					SIDI;	2	23	Subcompa
or engine code CDMA and all TT models.					SIDI;	2	21	Two Seate
					SIDI;	2	24	Compact C
4250	711	410	576	4250	FFV;	2	24	Compact C
					SIDI;	2	23	Subcompa
4250	726	421	589	4250	FFV;	2	23	Subcompa
					SIDI;	2	25	Midsize Ca
4250	726	421	589	4250	FFV;	2	25	Midsize Ca
						1	15	Midsize Ca
						2	21	Two Seate
						2	21	Two Seate
						2	21	Two Seate
					SIDI & PFI;	2	21	Two Seate
						2	21	Two Seate
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
						2	24	Compact C
					SIDI;	2	24	Compact C
						2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	23	Subcompa
						2	23	Subcompa
					SIDI;	2	23	Subcompa
						2	23	Subcompa
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	23	Subcompa
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
						2	24	Compact C
					Under EPA	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C
					SIDI;	2	24	Compact C

SIDI;	2	24	Compact C
SIDI;	2	24	Compact C
	2	24	Compact C
	1	14	Compact C
	1	14	Compact C
	2	24	Compact C
SIDI;	2	24	Compact C
SIDI;	2	25	Midsize Ca
SIDI;	2	25	Midsize Ca
	2	25	Midsize Ca
	2	25	Midsize Ca
SIDI;	2	25	Midsize Ca
SIDI;	2	230	Small SUV 2WD
SIDI;	2	231	Small SUV 4WD
	2	233	Standard SUV 4W
SIDI;	2	233	Standard SUV 4W
SIDI;	2	233	Standard SUV 4W

ac	Car/Truck	Calc Appr	Sales	Release Dat	EPA FE Label Dataset	Unique La	Label Rec	Relabel	Relabel D
	car	Vehicle Specific 5-cycle la	2/25	2/25/2014	16011	N	N		
	car	Derived 5-cycle label	7/28/2014	7/28/2014	16483	N	N		
	car	Vehicle Specific 5-cycle la	6/2	6/2/2014	16013	N	N		
	car	Vehicle Specific 5-cycle la	6/2	6/2/2014	16012	N	N		
	car	Vehicle Specific 5-cycle la	3/15	3/15/2014	16197	N	N		
	car	Derived 5-cycle label	6/9/2014	6/9/2014	15670	N	N		
el economy label values on. Previous values were XX MPG city, XX MPG highway, and XX MPG combined.	car	Derived 5-cycle label	7/29/2014	7/29/2014	16780	N	Y	RL	Relabel - la
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15675	N	N		
	car	Derived 5-cycle label	6/9/2014	6/9/2014	16313	N	N		
el economy label values on. Previous values were XX MPG city, XX MPG highway, and XX MPG combined.	car	Derived 5-cycle label	7/29/2014	7/29/2014	16782	N	Y	RL	Relabel - la
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15676	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15673	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15674	N	N		
	car	Derived 5-cycle label	6/9/2014	6/9/2014	16062	N	N		
	car	Vehicle Specific 5-cycle la	6/10	6/10/2014	15458	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	16061	N	N		
	car	Vehicle Specific 5-cycle la	6/10	6/10/2014	15459	N	N		
	car	Vehicle Specific 5-cycle la	5/15	5/15/2014	15647	N	N		
	car	Vehicle Specific 5-cycle la	5/15	5/15/2014	15385	N	N		
	car	Vehicle Specific 5-cycle la	5/15	5/15/2014	15456	N	N		
	car	Vehicle Specific 5-cycle la	5/15	5/15/2014	15648	N	N		
	car	Vehicle Specific 5-cycle la	5/15	5/15/2014	15386	N	N		
	car	Vehicle Specific 5-cycle la	5/15	5/15/2014	16699	N	N		
ons	car	Derived 5-cycle label	6/9/2014	6/9/2014	16637	N	N		
	car	Derived 5-cycle label	8/4/2014	8/4/2014	16057	N	N		
	car	Vehicle Specific 5-cycle la	8/4	8/4/2014	15650	N	N		
		Derived 5-cycle label	6/9/2014	6/9/2014	16034	N	N		
		Vehicle Specific 5-cycle la	6/9	6/9/2014	16700	N	N		
		Vehicle Specific 5-cycle la	6/10	6/10/2014	15460	N	N		
		Vehicle Specific 5-cycle la	6/9	6/9/2014	16701	N	N		
	D	Vehicle Specific 5-cycle la	6/2	6/2/2014	15408	N	N		
	D	Derived 5-cycle label	6/9/2014	6/9/2014	15711	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15493	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15497	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15601	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15598	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15492	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15496	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15600	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15597	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15589	N	N		
	car	Vehicle Specific 5-cycle la	6/9	6/9/2014	15590	N	N		
el economy label values on. Previous values were XX MPG city, XX MPG highway, and XX MPG combined.	car	Vehicle Specific 5-cycle la	7/28	7/28/2014	16705	N	Y	RL	Relabel - la
	car	Vehicle Specific 5-cycle la	8/4	8/4/2014	16702	N	N		

car	Vehicle Specific 5-cycle label	6/9/2014	16064	N	N
car	Vehicle Specific 5-cycle label	6/9/2014	16067	N	N
car	Vehicle Specific 5-cycle label	6/9/2014	16065	N	N
car	Vehicle Specific 5-cycle label	6/9/2014	16068	N	N
car	Vehicle Specific 5-cycle label	6/9/2014	16066	N	N
car	Vehicle Specific 5-cycle label	6/1/2014	15576	N	N
car	Vehicle Specific 5-cycle label	6/1/2014	15575	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15400	N	N
	Vehicle Specific 5-cycle label	6/9/2014	16059	N	N
car	Vehicle Specific 5-cycle label	3/15/2014	16014	N	N
car	Vehicle Specific 5-cycle label	3/15/2014	16015	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15558	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15654	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15557	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15661	N	N
car	Vehicle Specific 5-cycle label	3/28/2014	15559	N	N
car	Vehicle Specific 5-cycle label	5/15/2014	15659	N	N
car	Vehicle Specific 5-cycle label	6/1/2014	15737	N	N
car	Vehicle Specific 5-cycle label	5/23/2014	15692	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15678	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15681	N	N
car	Vehicle Specific 5-cycle label	5/12/2014	15599	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	16523	N	N
car	Derived 5-cycle label	7/28/2014	16085	N	N
car	Derived 5-cycle label	7/28/2014	16169	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16170	N	N
car	Derived 5-cycle label	8/25/2014	16388	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16092	N	N
car	Derived 5-cycle label	8/25/2014	16339	N	N
car	Derived 5-cycle label	7/28/2014	16086	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16088	N	N
car	Derived 5-cycle label	8/25/2014	16389	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16093	N	N
car	Derived 5-cycle label	8/25/2014	16340	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15689	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15690	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15687	N	N
car	Vehicle Specific 5-cycle label	7/14/2014	15602	N	N
car	Derived 5-cycle label	7/28/2014	16492	N	N
car	Derived 5-cycle label	7/28/2014	16198	N	N
car	Derived 5-cycle label	7/28/2014	16482	N	N
car	Derived 5-cycle label	8/8/2014	16832	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15293	N	N
car	Vehicle Specific 5-cycle label	4/1/2014	15313	N	N
car	Derived 5-cycle label	8/25/2014	16429	N	N

nomy label values on. Previous values were XX MPG city, XX MPG highway, and XX MPG combined; Relabel - la

car	Derived 5-cycle label	8/25/2014	16468	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16703	[redacted]	N	N
car	Derived 5-cycle label	8/4/2014	16485	[redacted]	N	N
car	Derived 5-cycle label	8/25/2014	16450	[redacted]	N	N
car	Vehicle Specific 5-cycle label	8/25/2014	16222	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16534	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/28/2014	16381	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16393	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16273	[redacted]	N	N
car	Derived 5-cycle label	7/14/2014	16806	[redacted]	N	N
car	Derived 5-cycle label	7/28/2014	16283	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/26/2014	15686	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15612	[redacted]	N	N
	Derived 5-cycle label	7/14/2014	15611	[redacted]	N	N
D	Vehicle Specific 5-cycle label	9/15/2014	15417	[redacted]	N	N
D	Derived 5-cycle label	8/1/2014	15688	[redacted]	N	N
D	Derived 5-cycle label	9/15/2014	16838	[redacted]	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	Engine Coc	N		N	N			
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve	
N	N	N	N		Y	CONTINUC	Y	AUDI VALV	
alue decreased	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
alue decreased	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	N	N		N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	
N	N	N	N		N	N			
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALV	Battery(s)
N	N	Engine cod	N		N	N			
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	ENGINE CC	N		Y	INLET AND	N		
N	N	Engine Coc	N		Y	Continuou	N		
N	N	Engine Coc	N		Y	Continuou	N		
alue decreased	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe	
N	N	Engine Coc	N		Y	CONTINUC	Y	Audi Valve	

N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	CONTINUCY	AUDI VALV
N	N	Generatior N	Y	CONTINUCY	AUDI VALV
N	N	Generatior N	Y	CONTINUCY	AUDI VALV
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	Deactivatic Y	Continuou Y	Multi-lobe
N	N	Engine Coc N	Y	INLET AND N	
N	N	Y	Cylinder d Y	Variation c N	
N	N	Engine Coc N	Y	INLET AND N	
N	N	Engine Coc Y	ELECTRON Y	HYDRAULI N	
N	N	Engine Coc Y	ELECTRON Y	HYDRAULI N	
N	N	ENGINE CC N	Y	INLET AND N	
N	N	Engine Co Y	ELECTRO Y	HYDRAUL N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	Engine Coc N	Y	MECANICA N	
N	N	Engine Coc N	N	N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	N	Y	position of N	
N	N	N	Y	CONTINUC N	
N	N	1.8L Engin N	Y	CONTINUC N	
N	N	1.8L Engin N	Y	CONTINUC N	
N	N	Engine Coc N	N	N	
alue decreased	N	Engine Coc N	N	N	
N	N	2.0L Engin N	Y	CONTINUCY	Audi Valve
N	N	2.0L Engin N	Y	CONTINUCY	Audi Valve
N	N	Engine Coc N	Y	MECANICA N	

N	N	Engine Coc	N	Y	MECANICA	N	
N	N	Engine Coc	N	Y	MECANICA	N	
N	N	Engine Coc	N	N		N	
N	N	Engine Coc	N	N		N	
N	N	Engine Coc	N	N		N	
N	N	Engine Coc	N	N		N	
N	N	Engine Coc	N	Y	MECANICA	N	
N	N	Engine Coc	N	Y	MECANICA	N	
N	N	Engine Coc	N	Y	MECANICA	N	
N	N	Engine Coc	N	N		N	
N	N	Engine Coc	N	N		N	
N	N	Engine cod	N	Y	Electronic	N	
N	N	N		Y	position of	N	
N	N	N		Y	position of	N	
N	N	Engine Coc	N	N		N	
N	N	N		Y	INTAKE / E	N	
N	N	V6 CYLIND	N	Y	MECANICA	N	Battery(s)

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacito
Energy St									

onv.

alves to ensure lift of the valves is zero (all valves closed), before injection and ignition of reactive chemicals as described

alves to ensure lift of the valves is zero (all valves closed), before injection and ignition of reactive chemicals as described

tolled and hydraulically adjusted.

1	Lithium Ior	266	5.00	37.0	On-Board

EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
EMENT
EMENT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC

alves to ensure lift of the valves is zero (all valves closed), before injection and ignition of reactive chemicals as described

valves only

alves on a single camshaft. No change in valve overlaps.
C/HADS(2)-HYDRAULIC
ONTINUOUSLY VVT
ONTINUOUSLY VVT
ECHANICAL-HYDRAULIC
VALVED CONTROL
AMS
AMS
AMS
onv.
AMS
onv.
AMS
AMS
onv.
AMS
onv.
controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

onv.
onv.

AMS

AMS
AMS
onv.

onv.
AMS
AMS
AMS
onv.
onv.

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

AMS	1 NiMH	288	6.00	21.5	On-Board

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger

second or 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
second or 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
second or 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

second or 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

second or 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

second or 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

| | | |

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common R			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common R			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common R			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
h				GDI	Spark Ignit			N	5W30 VW
				CRDI	Common R			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
h				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W40 VW
				CRDI	Common R			N	5W30 VW
		40		GDI	Spark Ignit	N	N	N	5W40 VW
				CRDI	Common R			N	5W30 VW
				GDI	Spark Ignit			N	5W40 VW
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	5W/30, VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	10W60 VV
				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit			N	5W30 VW
h				GDI	Spark Ignit			N	5W30 VW
				GDI	Spark Ignit	N		N	5W40

		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
h		GDI	Spark Ignit	N	5W30 VW
h		GDI	Spark Ignit	N	5W30 VW
h		GDI	Spark Ignit	N	5W30 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit N	N	5W40
		GDI	Spark Ignit N	N	5W40
h		GDI	Spark Ignit	N	5W30 VW
		MFI	Multipoint N	N	5W30 VW
h		GDI	Spark Ignit	N	5W30 VW
		MFI	Multipoint N	N	5W30 VW
h		GDI	Spark Ignit	N	5W30 VW
		MFI	Multipoint N	N	5W30 VW
		MFI	Multipoint	N	0W40 / VV
		MFI	Multipoint	N	10W60 VV
		MFI	Multipoint	N	5W30 VW
		MFI	Multipoint	N	5W30 VW
		GDPI	Spark Ignit	N	5W30 VW
		MFI	Multipoint/S	N	5W30 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		CRDI	Common R	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		CRDI	Common R	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		CRDI	Common R	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		CRDI	Common R	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W-40 VW
		GDI	Spark Ignit	N	5W40 / VV
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		CRDI	Common R	N	5W40 VW
		CRDI	Common R	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW
		GDI	Spark Ignit	N	5W40 VW

		GDI	Spark Ignit			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		CRDI	Common R			N	5W40 VW
		MFI	Multipoint			N	5W40 VW
		MFI	Multipoint			N	5W40 VW
		CRDI	Common R			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		CRDI	Common R			N	5W40 VW
		CRDI	Common R			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		GDI	Spark Ignit			N	5W40 VW
		CRDI	Common R			N	5W30 VW
		GDI	Spark Ignit			N	5W40 VW
3 PHASE CI	34	GDI	Spark Ignit	N	N	N	5W40 VW

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Auto(AV-S	Auto(AV-S						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M						
N	No	Auto(AV-S	Auto(AV-S	Audi A6 C\					
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi A6 qu					
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y 50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)	Audi Q7					
N	No	Auto(AM-S	Auto(AM-S						
N	No	Manual(M	Manual(M						
M 50500	No	Auto(AM-S	Auto(AM-S						
M 50500	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S						
N	No	Manual(M	Manual(M						
M 50500	No	Auto(AM-S	Auto(AM-S						
M 50500	No	Manual(M	Manual(M						
N 50700	No	Auto(AM-S	Auto(AM-S						
N 50700	No	Auto(AM-S	Auto(AM-S						
N 50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S						

N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N 50700	No	Auto(AM-S	Auto(AM-S
N 50700	No	Auto(AM-S	Auto(AM-S
N 50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N	No	Auto(AM-S	Auto(AM-S TT Coupe c
N	No	Auto(AM-S	Auto(AM-S TT Coupe c
N 50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N 50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N 50700	No	Auto(S8)	Auto(S8)
N	No	Auto(S8)	Auto(S8)
N VW50500	No	Auto(S8)	Auto(S8)
N 50500	No	Auto(AM-S	Auto(AM-S
Y 50700	Yes	Auto(AM-S	Auto(AM-S
Y 50700	Yes	Auto(AM-S	Auto(AM-S
N	No	Auto(AM-S	Auto(AM-S
N 50700	No	Auto(AM-S	Auto(AM-S VENENO
N	No	Auto(S6)	Auto(S6)
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Manual(M	Manual(M
N	No	Auto(S6)	Auto(S6)
N	No	Auto(AM-S	Auto(AM-S
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(S6)	Auto(S6)
N	No	Auto(AM-S	Auto(AM-S
N	No	Auto(S6)	Auto(S6)
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(AM-S	Auto(AM-S
N	No	Manual(M	Manual(M
N	No	Auto(S6)	Auto(S6)

N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(S6)	Auto(S6)	Jetta Base
N	No	Manual(M	Manual(M	
N	No	Manual(M	Manual(M	
N	No	Manual(M	Manual(M	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Manual(M	Manual(M	
N	No	Auto(AM-S	Auto(AM-S	
N	No	Auto(S6)	Auto(S6)	Tiguan fro
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
Y	Yes	Auto(S8)	Auto(S8)	Touareg H

[illegible]	EPA Calculated Gas G	[illegible]	[illegible] (GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	7	7	FVGAV02.(	9		
48.3		8	8	FVGAV02.(	5		
36.2		7	7	FVGAV02.(	9		
34.3		6	6	FVGAV02.(	9		
35.2		7	7	FVGAV02.(	9		
35.4		7	7	FVGAV02.(	5		
32.3		6	6	FVGAJ02.0	5		
33.1		6	6	FVGAV02.(	5		
30.1		5	5	FVGAJ02.0	5		
32.3		6	6	FVGAJ02.0	5		
33.1		6	6	FVGAV02.(	5		
36.9		7	7	FVGAV02.(	5		
30.0		5	5	FVGAV02.(	5		
28.1		5	5	FVGAJ03.0	5		
37.7		7	6	FVGAJ03.0	5		
27.9		5	5	FVGAJ03.0	5		
37.7		7	6	FVGAJ03.0	5		
28.8		5	5	FVGAV03.(	5		
28.0		5	5	FVGAV04.(	5		
36.9		7	6	FVGAJ03.0	5		
28.8		5	5	FVGAV03.(	5		
27.6		5	5	FVGAV04.(	5		
21.1		4	4	FVGAV06.3	5		
31.2		6	6	FVGAJ02.0	5		
30.0		5	5	FVGAV02.(	5		
29.5		5	5	FVGAV02.(	5		
29.6		5	5	FVGAJ02.0	5		
27.2		5	5	FVGAJ03.0	5		
34.3		7	5	FVGAJ03.0	5		
34.0		6	6	FVGAT02.(	5		
28.1		5	4	FVGAT03.(	5		
23.1		4	4	FVGAT03.(	5		
20.7		4	4	FVGAV04.2	5		
17.2		2	2	FVGAV04.2	5		
19.6		3	3	FVGAV05.2	5		
17.0		2	2	FVGAV05.2	5		
20.7		4	4	FVGAV04.2	5		
17.2		2	2	FVGAV04.2	5		
19.6		3	3	FVGAV05.2	5		
17.0		2	2	FVGAV05.2	5		
22.8		4	4	FVGAV04.2	5		
22.6		4	4	FVGAV04.2	5		
22.6		4	4	FVGAV04.(	5		
33.2		6	6	FVGAV02.(	5		

26.9	[redacted]	5	5 FVGAJ03.0	5
23.5		5	5 FVGAJ03.0	5
26.9		5	5 FVGAJ03.0	5
23.5		5	5 FVGAJ03.0	5
26.4		5	5 FVGAJ03.0	5
25.4		5	5 FVGAV04.(	5
25.4		5	5 FVGAV04.(	5
25.0		5	5 FVGAV04.(	5
24.9		4	4 FVGAJ03.0	5
33.3		6	6 FVGAV02.(	5
33.3		6	6 FVGAV02.(	5
23.7		4	4 FVGAV04.(	5
19.5		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
21.9		4	4 FVGAV04.(	5
18.3		3	3 FVGAV06.(	5
15.9		1	1 FVGAV06.8	5
12.6		1	1 FVGAV08.(	5
16.4		1	1 FVGAV06.5	5
14.6		1	1 FVGAV06.5	5
20.0		3	3 FVGAV05.2	5
15.8		1	1 FVGAV06.	5
37.0		7	7 FVGAV02.(	7
35.9		7	7 FVGAV02.(	7
33.9		6	6 FVGAV02.(	7
46.6		8	7 FVGAV02.(	5
33.1		6	6 FVGAV02.(	7
46.4		8	7 FVGAV02.(	5
35.9		7	7 FVGAV02.(	7
33.3		6	6 FVGAV02.(	7
45.8		8	7 FVGAV02.(	5
33.1		6	6 FVGAV02.(	7
45.3		8	7 FVGAV02.(	5
32.2		6	6 FVGAJ02.0	5
31.4		6	6 FVGAJ02.0	5
24.8		5	5 FVGAV03.(	5
32.4		6	6 FVGAV02.(	5
38.9		7	7 FVGAV02.(	9
39.3		7	7 FVGAV02.(	9
48.3		8	8 FVGAV02.(	5
48.2		8	8 FVGAV02.(	5
35.9		7	7 FVGAV02.(	9
35.8		7	7 FVGAV02.(	9
39.4		7	7 FVGAV02.(	7

38.4	[redacted]	7	7 FVGAV02.(	7
34.8		7	7 FVGAV02.(	7
49.2		8	8 FVGAV02.(	5
34.9		6	6 FVGAV02.(	5
35.9		7	7 FVGAV02.(	5
48.7		8	8 FVGAV02.(	5
34.0		6	6 FVGAV02.(	7
37.7		7	7 FVGAV02.(	7
37.3		7	7 FVGAV02.(	7
46.2		8	7 FVGAV02.(	5
46.9		8	7 FVGAV02.(	5
28.5		5	5 FVGAV03.(	5
29.7		5	5 FVGAJ02.0	5
29.6		5	5 FVGAJ02.0	5
29.6		5	5 FVGAT03.(	5
25.0		4	4 FVGAT03.(	5
28.2		5	5 FVGAT03.(	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	7
FVGAV02.(	7
FVGAV02.(	5

FVGAV02.(	5
FVGAV02.(	5

FVGAV02.(	5
FVGAV02.(	5
FVGAV02.(	5

[illegible]	You Save$	You Spend$	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	500		379	267	328			
	3250		326	236	285			
	750		362	256	314			
	0		379	280	334			
	500		366	271	323			
	500		374	280	332			
		500	415	295	361			
	0		398	277	343			
		1500	446	314	386			
		500	415	295	361			
	0		398	277	343			
	750		360	272	320			
		1500	452	306	386			
		2000	482	326	412			
	1250		416	267	349			
		2500	493	321	416			
	1250		416	267	349			
		2000	473	303	397			
		2000	484	299	401			
	1000		426	280	360			
		2000	473	303	397			
		2000	492	310	410			
		5750	640	403	534			
		1000	420	317	373			
		1500	451	313	389			
		1500	446	316	387			
		1500	452	322	393			
		2500	496	347	429			
	500		430	328	385			
	0		369	298	337			
		1750	541	369	464			
		4750	570	409	498			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		5750	656	394	538			
		9250	772	439	622			
		6750	686	400	557			
		9250	753	454	618			
		4750	562	379	480			
		4750	558	398	486			
		4750	614	355	497			
	0		381	289	340			

	2500	488	321	413
	3250	519	341	439
	2500	488	321	413
	3250	519	341	439
	2500	500	341	428
	3250	531	330	441
	3250	531	330	441
	3250	534	331	442
	4000	528	373	458
0		395	284	345
0		395	284	345
	4000	580	347	475
	8000	710	421	580
	5750	638	370	517
	8000	736	443	604
	5750	638	370	517
	8000	736	443	604
	11000	840	501	688
	17500	1050	599	847
	11000	836	481	676
	12750	902	547	742
	6750	629	441	544
	11000	831	523	692
1500		357	270	318
1250		372	270	326
0		377	302	343
2750		332	251	295
0		393	292	347
2750		333	251	296
1250		369	274	326
	500	392	314	357
2750		335	256	300
0		393	292	347
2750		344	254	303
	500	402	284	349
	500	428	278	361
	3250	523	351	446
	500	405	292	354
2000		352	247	305
2250		350	240	300
3250		326	236	285
3250		334	227	286
750		358	271	319
750		355	258	311
2250		347	238	298

2000		351	239	301
500		379	281	334
3250		324	228	281
1000		395	265	337
1500		357	259	313
3250		332	223	283
0		389	274	338
1500		363	247	311
1500		366	251	314
2750		344	243	298
3000		341	234	293
	1500	449	319	390
	1500	431	344	392
	1500	435	344	394
	1250	517	351	442
	4000	520	391	462
	2500	447	372	413

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char
309.0	191.0	255.9	378.7	267.1	328.5
247.7	165.1	210.5	325.6	236.3	285.4
289.0	188.0	243.6	362.1	255.5	314.1
305.0	200.0	257.8	378.6	280.1	334.3
294.0	198.0	250.8	366.0	271.0	323.2
292.0	199.0	250.2	373.7	280.2	331.6
327.0	210.0	274.4	415.0	295.0	361.0
321.2	202.4	267.7	398.0	276.6	343.4
353.0	224.0	295.0	445.7	313.9	386.4
327.0	210.0	274.4	415.0	295.0	361.0
321.2	202.4	267.7	398.0	276.6	343.4
282.0	189.0	240.2	360.0	272.0	320.4
358.0	219.0	295.4	452.0	306.0	386.3
383.5	233.0	315.8	481.7	326.0	411.6
331.0	194.0	269.4	415.7	267.3	348.9
385.0	236.0	318.0	492.9	320.9	415.6
331.0	194.0	269.4	415.7	267.3	348.9
376.5	225.0	308.3	473.4	302.9	396.7
391.0	224.0	315.9	483.9	299.0	400.7
339.0	198.0	275.6	425.6	280.1	360.1
376.5	225.0	308.3	473.4	302.9	396.7
396.0	226.0	319.5	492.3	309.7	410.1
515.0	310.0	422.8	640.3	403.3	533.6
331.0	226.0	283.8	419.7	316.6	373.3
357.5	223.0	297.0	451.0	312.5	388.7
357.0	230.0	299.9	445.6	315.7	387.1
358.0	230.0	300.4	451.6	321.9	393.2
390.0	251.0	327.4	496.0	347.0	429.0
348.0	231.0	295.4	430.5	328.5	384.6
380.0	223.0	309.4	369.0	298.0	337.0
446.0	260.0	362.3	541.0	369.0	463.6
458.0	295.0	384.6	569.6	409.5	497.6
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
540.6	299.8	432.3	656.3	394.3	538.4
651.3	362.7	521.4	771.6	439.1	622.0
577.0	309.4	456.6	685.6	400.2	557.2
646.3	377.5	525.3	753.1	454.0	618.5
466.0	296.0	389.5	562.0	379.0	479.6
463.0	307.0	392.8	558.0	398.0	486.0
499.5	269.5	396.0	613.8	354.8	497.3
311.0	214.0	267.4	381.4	289.2	339.9

396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
396.0	248.0	329.4	488.0	321.0	412.8
443.0	266.0	363.4	519.0	341.0	438.9
401.0	256.0	335.8	500.0	341.0	428.4
427.7	252.5	348.9	530.7	330.5	440.6
427.7	252.5	348.9	530.7	330.5	440.6
444.0	243.0	353.6	534.0	330.6	442.5
427.0	269.0	355.9	528.0	372.7	458.1
312.7	210.3	266.6	395.4	284.3	345.4
312.7	210.3	266.6	395.4	284.3	345.4
462.0	263.0	372.4	580.0	347.0	475.2
576.0	314.0	458.1	709.5	420.8	579.6
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
511.0	278.0	406.2	638.3	369.6	517.4
617.0	333.0	489.2	736.3	442.9	604.3
690.0	408.0	563.1	840.4	501.0	687.7
885.0	495.0	709.5	1050.0	599.0	847.0
705.0	353.0	546.6	836.0	481.0	676.2
771.0	418.0	612.2	902.0	547.0	742.2
524.0	346.0	443.9	628.6	441.0	544.2
708.0	392.0	565.8	831.0	523.0	692.4
277.9	191.7	239.1	357.0	270.4	318.0
290.3	191.7	245.9	371.7	270.4	326.1
306.6	211.2	263.7	377.1	302.3	343.4
253.0	176.0	218.4	331.8	251.0	295.4
322.0	206.1	269.8	392.7	291.6	347.2
254.0	176.0	218.9	333.0	251.0	296.1
287.7	194.3	245.7	368.6	273.9	326.0
308.8	219.0	268.4	392.5	313.5	357.0
256.0	180.0	221.8	335.4	256.4	299.8
322.0	206.1	269.8	392.7	291.6	347.2
263.0	178.0	224.8	343.6	253.7	303.2
327.7	209.1	274.3	402.3	284.1	349.2
347.4	204.8	283.2	428.4	278.4	360.9
434.0	265.0	358.0	523.0	351.0	445.6
321.0	213.0	272.4	404.7	291.7	353.9
274.0	174.0	229.0	352.4	246.5	304.7
272.0	169.0	225.6	350.1	239.8	300.5
247.7	165.1	210.5	325.6	236.3	285.4
255.0	158.0	211.4	334.2	226.8	285.9
288.0	195.0	246.2	358.0	270.7	318.7
294.0	191.0	247.7	354.6	257.9	311.1
269.6	168.0	223.9	347.2	238.5	298.3

272.8	168.4	225.8	351.0	239.0	300.6
302.4	201.2	256.9	378.6	280.6	334.5
246.0	159.0	206.8	323.6	228.1	280.6
310.0	188.0	255.1	394.9	265.4	336.6
302.0	179.0	246.6	356.6	259.3	312.8
253.0	155.0	208.9	331.8	222.7	282.7
316.2	198.2	263.1	389.2	274.4	337.5
283.0	174.7	234.3	363.0	247.5	311.0
285.3	177.3	236.7	365.8	251.0	314.1
263.0	170.0	221.2	343.6	242.9	298.3
261.0	163.0	217.0	341.3	233.5	292.8
372.0	238.0	311.7	449.0	319.0	390.5
340.8	246.4	298.3	431.3	344.0	392.0
343.9	246.4	300.0	435.0	344.0	394.0
422.0	248.0	343.7	517.0	351.0	442.3
416.0	281.0	355.2	520.1	390.6	461.8
354.0	267.0	314.8	446.9	371.8	413.1

[illegible]	Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT
N	3.7	3.7			
N	2.8	2.8			
N	3.6	3.6			
N	3.8	3.8			
N	3.7	3.7			
N	3.7	3.7			
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N	3.8	3.8			
N	4.3	4.3			
N	4.0	4.0			
N	3.8	3.8			
N	3.6	3.6			
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N	4.5	4.5			
N	4.5	4.5			
N	3.6	3.6			
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N	4.5	4.5			
N	5.9	5.9			
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N	5.6	5.6			
N	5.9	5.9			
N	7.1	7.1			
N	6.2	6.2			
N	7.1	7.1			
N	5.9	5.9			
N	7.1	7.1			
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N	5.3	5.3
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EPA_UNRD

EPA_UNR	EPA_UNR	EPA_UNR	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10	rating on Ethanol (EPA Deter
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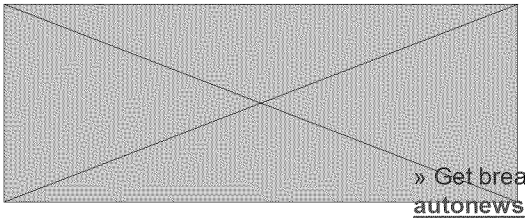
mined)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/18/2014 8:30:36 PM
Subject: DAILY: Ford begins testing first right-hand-drive Mustang | U.S. details plans for car-to-car safety communications | Continental lures Google self-driving exec | Why Americans are rediscovering Italian cars

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TOP NEWS

Ford begins testing first right-hand-drive Mustang

3:45 pm U.S. ET | Aug 18

Ford has begun testing the first prototype of the right-hand-drive Mustang pony car. Ford said its engineers recently finished building the handmade prototype, which will be used in various developmental tests in coming months. ... » READ

U.S. details plans for car-to-car safety communications

3:08 pm U.S. ET | Aug 18

After more than a decade of research into car-to-car communications, federal auto safety regulators took a step forward today by unveiling their plan for requiring cars to have wireless gear that will enable them to warn drivers of danger. ... » READ

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Continental lures Google self-driving exec in Silicon Valley push

UPDATED: 8/18/14 1:55 pm ET - adds detail
1:22 pm U.S. ET | Aug 18

German supplier Continental AG is growing its Silicon Valley presence to help car companies roll out autonomous driving and other "intelligent" features over the coming years -- and it has hired one of Google's self-driving car executives to lead the effort. ...

» READ

Chrysler names Bigland to lead Alfa Romeo brand in N.A.

UPDATED: 8/18/14 12:17 p.m ET - corrected
9:24 am U.S. ET | Aug 18

Chrysler Group, rolling out sales of the Alfa Romeo 4C sports car in the United States, has picked Reid Bigland to lead the Italian sports car brand's return to North America. Bigland, 47, one of the rising stars at Fiat Chrysler Automobiles, had been head of the company's fast-growing Ram brand. ... » READ

Detroit-area dealers struggle with submerged autos, trapped customers

UPDATED: 8/17/14 9:27 am ET - adds photo
10:00 am U.S. ET | Aug 16

As the rain fell last Monday afternoon, Pat Presutti, new-car sales manager at Jim Riehl's Friendly Chrysler Jeep in suburban Detroit sent a porter out to check the water level in the back lot where nearly 100 cars were parked. ... » READ

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Even millennials bypass social media during car-buying journey

Ford, Chevy dangle new deals as U.S. sales, share lag

Toyota makes stronger showing in J.D. Power seat quality study

2:25 pm U.S. ET | Aug 18

UAW says union membership near majority at VW Tennessee plant

1:52 pm U.S. ET | Aug 16

Tesla raises warranty on Model S to 8 years, 'infinite' mileage

UPDATED: 8/16/14 9:32 am ET - adds details, reactions

4:46 pm U.S. ET | Aug 15

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar
» Oct. 15 - Best Dealerships To Work For
» Nov. 13-14 - Automobilwoche Kongress
» January 13-14 - Automotive News World Congress
» January 22 - Automotive News Retail Forum

UPCOMING WEBINARS

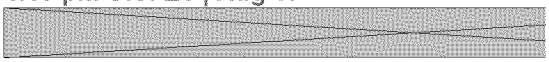
» Sept. 4 - Digital Influence



Saleen, bullish on EVs, reinvents Tesla Model S

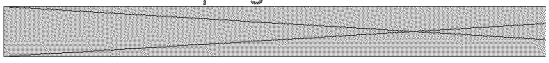
UPDATED: 8/17/14 5:02 pm ET - adds photo

4:19 pm U.S. ET | Aug 17



'There is no second chance,' Volvo CEO says of new XC90

9:00 am U.S. ET | Aug 18



Self-driving tech will make Volvos even safer, r&d boss says

12:01 am U.S. ET | Aug 17



U.S. judge appoints lead counsel for GM ignition-switch cases

UPDATED: 8/15/14 10:47 pm ET - adds link

7:06 pm U.S. ET | Aug 15



Mopar, 3M team up for Jeep map decals

12:01 am U.S. ET | Aug 17



Automakers make room for Pandora

12:01 am U.S. ET | Aug 16



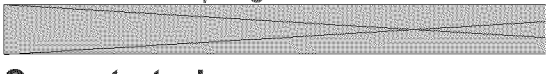
China finds Mercedes guilty of price fixing, report says

4:53 am U.S. ET | Aug 18



Russia may ban car imports if West applies new sanctions, report says

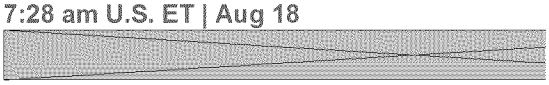
5:54 am U.S. ET | Aug 18

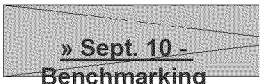


Sensata to buy pressure-

sensor maker Schrader in $1 billion deal

7:28 am U.S. ET | Aug 18

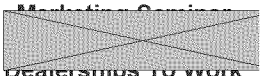




» Sept. 10 - Benchmarking Performance by FirstLook

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» Sept. 23 - NY Marketing Campaign



Dealerships To Work For

» Nov. 13-14 - Automobilwoche Kongress

» January 13-14 Automotive News World Congress

» January 22 - Automotive News Retail Forum

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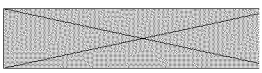
» Aug. 20 - Staffing: How to Get Your F&I Office Sized Right



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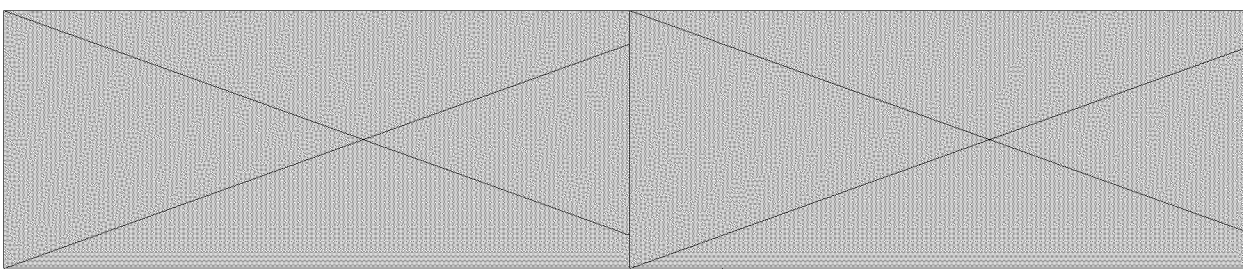
» Sept. 4 - Digital Influence by Cars.com

» Sept. 10 - Benchmarking Performance by FirstLook



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Cc: walter.lewis@porsche.us[walter.lewis@porsche.us]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Mon 8/18/2014 9:52:03 PM
Subject: re: 2015 FE Guide - Data EPA's database as of Aug 15, 2014 for your review; on Aug 28, 2014 I will send error free Verify data to DOE for the 2015 Printed Guide & the web
Porsche_2015 FEGuide-all rel dates-no-sales-8-15-2014.xlsx

Ross,

re: 2015 FE Guide - Data EPA's database as of Aug 15, 2014 for your review; on Aug 28, 2014 I will send error free Verify data to DOE for the 2015 Printed Guide & the web

Attached are the data in Verify as of August 15, 2014. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2015 Printed Guide. Note that there are separate tabs for EV, PHEV, and fuel cell vehicles (if applicable).

Printed Guide – For the 2015 Printed Guide, I will send all error-free data in Verify to DOE on August 28, 2014, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 17, 2014, when 2015 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions. Please email me if there are data in Verify which you do not want included in the 2015 Printed Guide.

Web Update - The next normal posting of 2015 FE Label data for www.fueleconomy.gov will be on August 28, 2013 to coincide with the schedule for the 2015 Printed Guide. On that day, I'll send all the error-free data in Verify (which is releasable) to DOE to update www.fueleconomy.gov, business-as-usual.

Reminders:

- Please double check the attached data in Verify for errors, missing labels, etc.
- Please send me a short email when you think the 2015 FE Label data is "good to go."
- August 27, 2014 is the last day to make changes for the 2015 Printed Guide.
- If you enter new label data into Verify before Aug 28, 2014, please double check it carefully for accuracy.

•□□□□□□□□ Don’t forget to send me the placeholders for the 2015 Printed Guide in an Excel spreadsheet as soon as possible.

Please make any needed corrections to Verify when you get a chance.

Thanks

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2015 Porsche	Porsche	911 Carrer	PRX	102	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	101	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	110	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	109	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	112	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	111	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	114	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	113	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	116	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	115	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	104	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	103	3.4	6
		2015 Porsche	Porsche	911 Carrer	PRX	106	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	105	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	108	3.8	6
		2015 Porsche	Porsche	911 Carrer	PRX	107	3.8	6
		2015 Porsche	Porsche	911 GT3	PRX	531	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX	542	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX	540	3.4	6
		2015 Porsche	Porsche	911 Targa	PRX	544	3.8	6
		2015 Porsche	Porsche	911 Targa	PRX	543	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX	521	3.8	6
		2015 Porsche	Porsche	911 Turbo	PRX	523	3.8	6
		2015 Porsche	Porsche	Boxster	PRX	202	2.7	6
		2015 Porsche	Porsche	Boxster	PRX	201	2.7	6
		2015 Porsche	Porsche	Boxster GT	PRX	224	3.4	6
		2015 Porsche	Porsche	Boxster GT	PRX	223	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX	222	3.4	6
		2015 Porsche	Porsche	Boxster S	PRX	221	3.4	6
Diesel;		2015 Porsche	Porsche	Cayenne D	PRX	431	3.0	6
		2015 Porsche	Porsche	Cayman	PRX	212	2.7	6
		2015 Porsche	Porsche	Cayman	PRX	211	2.7	6
		2015 Porsche	Porsche	Cayman G	PRX	234	3.4	6
		2015 Porsche	Porsche	Cayman G	PRX	233	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX	232	3.4	6
		2015 Porsche	Porsche	Cayman S	PRX	231	3.4	6
		2015 Porsche	Porsche	Macan S	PRX	311	3.0	6
		2015 Porsche	Porsche	Macan Tur	PRX	321	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	601	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	602	3.6	6
		2015 Porsche	Porsche	Panamera	PRX	616	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	617	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	621	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	611	3.0	6
		2015 Porsche	Porsche	Panamera	PRX	631	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	632	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	636	4.8	8
		2015 Porsche	Porsche	Panamera	PRX	637	4.8	8

Transmiss	City FE (G	Hwy FE (G	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	20	28	23				25.5000	39.5000	30.3389
Manual(M	19	27	22				23.7000	38.2000	28.5822
Auto(AM-S	20	28	23				25.4965	38.6494	30.1071
Manual(M	19	27	22				24.0491	37.8468	28.7688
Auto(AM-S	20	27	22				24.9475	37.5494	29.3854
Manual(M	19	26	22				23.5983	36.5997	28.0884
Auto(AM-S	19	26	22				24.1000	36.7000	28.5037
Manual(M	18	26	21				23.1000	36.8000	27.7487
Auto(AM-S	19	26	21				23.3000	36.4000	27.8027
Manual(M	18	26	21				22.8000	36.1000	27.3312
Auto(AM-S	21	28	23				25.9904	39.4499	30.7045
Manual(M	19	27	22				24.0491	37.9499	28.7955
Auto(AM-S	19	27	22				24.5000	37.9000	29.1356
Manual(M	19	27	22				23.8449	37.9484	28.6337
Auto(AM-S	19	27	22				23.9000	38.0000	28.6906
Manual(M	19	27	22				23.6474	37.0494	28.2451
Auto(AM-S	15	20	17				18.2000	28.3000	21.6822
Auto(AM-S	19	26	22				24.1000	36.9000	28.5578
Manual(M	18	26	21				23.0000	36.5000	27.5924
Auto(AM-S	18	25	21				23.1000	35.4000	27.3812
Manual(M	18	26	21				22.5000	35.6000	26.9652
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	22	32	26				27.9000	44.9000	33.6298
Manual(M	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S	21	30	24				26.3000	41.9000	31.5932
Manual(M	20	28	23				24.8000	38.5000	29.5284
Auto(S8)	20	29	23				24.1000	41.0000	29.5883
Auto(AM-S	22	32	26				27.9000	44.9000	33.6298
Manual(M	20	30	24				25.9000	41.5000	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37.0000	28.8146
Auto(AM-S	21	30	24				26.3000	41.9000	31.5932
Manual(M	20	28	23				24.8000	38.5000	29.5284
Auto(AM-S	17	23	19				21.4471	31.6987	25.1000
Auto(AM-S	17	23	19				20.6947	32.3997	24.7122
Auto(AM-S	18	28	22				22.9368	39.0499	28.1669
Auto(AM-S	18	27	21				22.5783	37.5997	27.5271
Auto(AM-S	17	27	21				21.9036	37.2798	26.8955
Auto(AM-S	17	26	20				21.4891	37.0141	26.4887
Auto(AM-S	16	24	19				19.3871	33.7000	23.9679
Auto(AM-S	17	27	21				21.9036	37.2798	26.8955
Auto(AM-S	15	24	18				19.1667	33.7481	23.7927
Auto(AM-S	15	24	18				18.9742	33.3000	23.5293
Auto(AM-S	15	24	18				19.1667	33.7481	23.7927
Auto(AM-S	15	24	18				18.9742	33.3000	23.5293

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
20.2000	28.2000	23.2000		NA	Naturally A	AMS	Automatec		7
18.8000	27.3000	21.9000		NA	Naturally A	M	Manual		7
20.1778	27.6110	22.9592		NA	Naturally A	AMS	Automatec		7
19.1036	27.0590	22.0164		NA	Naturally A	M	Manual		7
19.7713	26.8542	22.4340		NA	Naturally A	AMS	Automatec		7
18.7674	26.1995	21.5137		NA	Naturally A	M	Manual		7
19.1000	26.3000	21.8000		NA	Naturally A	AMS	Automatec		7
18.4000	26.3000	21.2759		NA	Naturally A	M	Manual		7
18.5445	26.0617	21.3106		NA	Naturally A	AMS	Automatec		7
18.2000	25.9000	21.0000		NA	Naturally A	M	Manual		7
20.5425	28.1607	23.3899		NA	Naturally A	AMS	Automatec		7
19.1036	27.1300	22.0375		NA	Naturally A	M	Manual		7
19.4000	27.1000	22.2000		NA	Naturally A	AMS	Automatec		7
18.9514	27.1289	21.9255		NA	Naturally A	M	Manual		7
19.0000	27.2000	22.0000		NA	Naturally A	AMS	Automatec		7
18.8041	26.5097	21.6338		NA	Naturally A	M	Manual		7
14.7000	20.4000	16.8000	G	NA	Naturally A	AMS	Automatec		7
19.1000	26.4000	21.8000		NA	Naturally A	AMS	Automatec		7
18.3000	26.1000	21.1000		NA	Naturally A	M	Manual		7
18.4000	25.4000	21.0000		NA	Naturally A	AMS	Automatec		7
17.9000	25.5000	20.7000		NA	Naturally A	M	Manual		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automatec		7
21.9000	31.9000	25.5000		NA	Naturally A	AMS	Automatec		7
20.5000	29.6000	23.8000		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automatec		7
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8000	29.8000	24.1000		NA	Naturally A	AMS	Automatec		7
19.7000	27.5000	22.6000		NA	Naturally A	M	Manual		6
19.6000	29.0000	22.9471		TC	Turbochar	SA	Semi-Auto		8
21.9000	31.9000	25.5000		NA	Naturally A	AMS	Automatec		7
20.5000	29.6000	23.8000		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automatec		7
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8000	29.8000	24.1000		NA	Naturally A	AMS	Automatec		7
19.7000	27.5000	22.6000		NA	Naturally A	M	Manual		6
17.1522	22.8013	19.3044		TC	Turbochar	AMS	Automatec		7
16.5830	23.2893	19.0517		TC	Turbochar	AMS	Automatec		7
18.3000	27.9000	21.7000		NA	Naturally A	AMS	Automatec		7
18.0000	26.9000	21.1000		NA	Naturally A	AMS	Automatec		7
17.4965	26.6685	20.7002		TC	Turbochar	AMS	Automatec		7
17.1840	26.4853	20.4094		TC	Turbochar	AMS	Automatec		7
15.5885	24.1929	18.5588		NA	Naturally A	AMS	Automatec		7
17.4965	26.6685	20.7002		TC	Turbochar	AMS	Automatec		7
15.4000	24.2000	18.4000		TC	Turbochar	AMS	Automatec		7
15.3000	23.9000	18.3000		TC	Turbochar	AMS	Automatec		7
15.4000	24.2000	18.4000		TC	Turbochar	AMS	Automatec		7
15.3000	23.9000	18.3000		TC	Turbochar	AMS	Automatec		7

Lockup T	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	4		4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	4		4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	4		4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	4		4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	4		4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
N	N	4		4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	4	paddles)	4-Wheel D	FPRXV04.0	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV02.7	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV02.7	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
Y	N	A		All Wheel I	FPRXT03.0CDD		5	DU	Diesel, ultr
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV02.7	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV02.7	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
N	N	R		2-Wheel D	FPRXV03.4	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXT03.6	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXT03.6	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV03.6	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV03.6	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV03.6	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV03.6	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV04.8	10		GP	Gasoline (F
tomated M	anual with	p	paddles)	2-Wheel D	FPRXV03.6	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV04.8	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV04.8	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV04.8	10		GP	Gasoline (F
tomated M	anual with	A	paddles)	All Wheel I	FPRXV04.8	10		GP	Gasoline (F

Fuel Unit Fuel Unit	Gas Guzzl	Gas Guzzl	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt	68	5					
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt	70	5					
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
ulfur (15 ppm, maximum)	Truck							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Not exempt							
MPG miles per gl	Truck							
MPG miles per gl	Truck							
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		
MPG miles per gl	Not exempt				108	16		

Annual Fu	EPA Calcu	Comment	City2 FE (I	Hwy2 Fue	Comb2 Fu	Low'd Cit	Low'd Hw	Low'd Cor	City2 Una
2500	2500	911 Carrera A7							
2600	2600	911 Carrera M7							
2500	2500	911 Carrera 4 A7							
2600	2600	911 Carrera 4 M7							
2600	2600	911 Carrera 4 Cabriolet A7							
2600	2600	911 Carrera 4 Cabriolet M7							
2600	2600	911 Carrera 4S A7							
2700	2700	911 Carrera 4S M7							
2700	2700	911 Carrera 4S Cabriolet A7							
2700	2700	911 Carrera 4S Cabriolet M7							
2500	2500	911 Carrera Cabriolet A7							
2600	2600	911 Carrera Cabriolet M7							
2600	2600	911 Carrera S A7							
2600	2600	911 Carrera S M7							
2600	2600	911 Carrera S Cabriolet A7							
2600	2600	911 Carrera S Cabriolet M7							
3350	3350	911 GT3							
2600	2600	911 Targa A7							
2700	2700	911 Targa M7							
2700	2700	911 Targa S A7							
2700	2700	911 Targa S M7							
2850	2850	911 Turbo / Turbo Cabriolet							
2850	2850	911 Turbo S / Turbo S Cabriolet							
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
2450	2450	5-Cycle FE and CREE							
2200	2200								
2400	2400								
2300	2300								
2600	2600								
2400	2400								
2500	2500								
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
3000	3000	Equipped with Start/Stop engine management (Latching system). Label reflects harmonic ave							
2600	2600	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
2850	2850	Harmonic average of Start/Stop ON and OFF.							
3000	3000	Harmonic average of Start/Stop ON and OFF.							
2700	2700	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							
3150	3150	Harmonic average of Start/Stop ON and OFF.							

Fuel2 Us	Fuel2 Us	Fuel2 Unit	Fuel2 Unit

rage of SS ON and SS OFF.
rage of SS ON and SS OFF.

Alternative Fuel	Fuel2 Am	City CO2	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	21		Two Seate
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	22		Minicompa
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
							2	233		Standard SUV 4W
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	21		Two Seate
						SIDI;	2	231		Small SUV 4WD
						SIDI;	2	231		Small SUV 4WD
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars
						SIDI;	2	26		Large Cars

Car/Truck	Calc Appr	Sales	Release D	EPA FE Label Dataset ID	Unique La	Label Rec	Relabel	Relabel D
car	Derived 5-cycle label		6/23/2014	16317	Y	N		
car	Derived 5-cycle label		6/23/2014	16316	Y	N		
car	Derived 5-cycle label		6/23/2014	16325	N	N		
car	Derived 5-cycle label		6/23/2014	16324	N	N		
car	Derived 5-cycle label		6/23/2014	16327	N	N		
car	Derived 5-cycle label		6/23/2014	16326	Y	N		
car	Derived 5-cycle label		6/23/2014	16329	N	N		
car	Derived 5-cycle label		6/23/2014	16328	Y	N		
car	Derived 5-cycle label		6/23/2014	16526	N	N		
car	Derived 5-cycle label		6/23/2014	16330	N	N		
car	Derived 5-cycle label		6/23/2014	16412	Y	N		
car	Derived 5-cycle label		6/23/2014	16318	Y	N		
car	Derived 5-cycle label		6/23/2014	16321	Y	N		
car	Derived 5-cycle label		6/23/2014	16320	Y	N		
car	Derived 5-cycle label		6/23/2014	16323	Y	N		
car	Derived 5-cycle label		6/23/2014	16322	Y	N		
car	Derived 5-cycle label		6/23/2014	16341	N	N		
car	Derived 5-cycle label		6/23/2014	16342	Y	N		
car	Derived 5-cycle label		6/23/2014	16391	Y	N		
car	Derived 5-cycle label		6/23/2014	16344	N	N		
car	Derived 5-cycle label		6/23/2014	16343	Y	N		
car	Derived 5-cycle label		6/23/2014	16337	N	N		
car	Derived 5-cycle label		6/23/2014	16338	N	N		
car	Derived 5-cycle label		6/23/2014	16231	N	N		
car	Derived 5-cycle label		6/23/2014	16229	N	N		
car	Derived 5-cycle label		6/23/2014	16250	Y	N		
car	Derived 5-cycle label		6/23/2014	16248	Y	N		
car	Derived 5-cycle label		6/23/2014	16238	Y	N		
car	Derived 5-cycle label		6/23/2014	16236	Y	N		
D	Vehicle Specific 5-cycle label		8/17/2014	16793	N	N		
car	Derived 5-cycle label		6/23/2014	16232	N	N		
car	Derived 5-cycle label		6/23/2014	16230	N	N		
car	Derived 5-cycle label		6/23/2014	16251	Y	N		
car	Derived 5-cycle label		6/23/2014	16249	Y	N		
car	Derived 5-cycle label		6/23/2014	16239	Y	N		
car	Derived 5-cycle label		6/23/2014	16237	Y	N		
	Derived 5-cycle label		5/9/2014	15889	N	N		
	Derived 5-cycle label		5/9/2014	15890	N	N		
car	Derived 5-cycle label		6/16/2014	16105		N		
car	Derived 5-cycle label		6/16/2014	16107		N		
car	Derived 5-cycle label		6/16/2014	16110		N		
car	Derived 5-cycle label		6/16/2014	16111		N		
car	Derived 5-cycle label		6/16/2014	16112		N		
car	Derived 5-cycle label		6/16/2014	16109		N		
car	Derived 5-cycle label		6/9/2014	16039		N		
car	Derived 5-cycle label		6/9/2014	16040		N		
car	Derived 5-cycle label		6/9/2014	16041		N		
car	Derived 5-cycle label		6/9/2014	16042		N		

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	N	Y		Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	N	N	N					
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	2TWC, 2H(	N	Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		
N	N	N		Y	Porsche V\Y		Porsche V\		

evice Desc	Energy St	# Batterie	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell [	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40
				GDI	Spark Ignit			N	0W40

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	911 Carrer					
N	No	Manual(M	Manual(M	911 Carrer					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Boxster GT					
N	No	Auto(AM-S	Auto(AM-S	Boxster S					
N	No	Manual(M	Manual(M	Boxster S					
N	No	Auto(S8)	Auto(S8)	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Cayman GT					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Cayman S					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera					

EPA Calcu	EPA Calculated Gas G	[illegible]	GHG Ratin	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
30.5		5	5	FPRXV04.0	5		
28.8		5	5	FPRXV04.0	5		
30.1		5	5	FPRXV04.0	5		
28.9		5	5	FPRXV04.0	5		
29.5		5	5	FPRXV04.0	5		
28.2		5	5	FPRXV04.0	5		
28.8		5	5	FPRXV04.0	5		
28.0		5	5	FPRXV04.0	5		
28.0		5	5	FPRXV04.0	5		
27.6		5	5	FPRXV04.0	5		
30.6		5	5	FPRXV04.0	5		
28.9		5	5	FPRXV04.0	5		
29.4		5	5	FPRXV04.0	5		
28.6		5	5	FPRXV04.0	5		
28.9		5	5	FPRXV04.0	5		
28.3		5	5	FPRXV04.0	5		
21.8		4	4	FPRXV04.0	5		
29.4		5	5	FPRXV04.0	5		
28.2		5	5	FPRXV04.0	5		
27.5		5	5	FPRXV04.0	5		
27.1		5	5	FPRXV04.0	5		
27.0		5	5	FPRXV04.0	5		
27.0		5	5	FPRXV04.0	5		
33.9		6	6	FPRXV02.7	5		
31.4		6	6	FPRXV02.7	5		
32.8		6	6	FPRXV03.4	5		
29.0		5	5	FPRXV03.4	5		
31.8		6	6	FPRXV03.4	5		
31.8		5	5	FPRXV03.4	5		
		5	5	FPRXT03.0	5		
33.9		6	6	FPRXV02.7	5		
31.4		6	6	FPRXV02.7	5		
32.8		6	6	FPRXV03.4	5		
29.0		5	5	FPRXV03.4	5		
31.8		6	6	FPRXV03.4	5		
31.8		5	5	FPRXV03.4	5		
		4	4	FPRXT03.6	5		
		4	4	FPRXT03.6	5		
28.4		5	5	FPRXV03.6	5		
27.7		5	5	FPRXV03.6	5		
27.1		5	5	FPRXV03.6	5		
26.7		5	5	FPRXV03.6	5		
24.1		4	4	FPRXV04.8	5		
27.1		5	5	FPRXV03.6	5		
24.0		4	4	FPRXV04.8	5		
23.7		4	4	FPRXV04.8	5		
24.0		4	4	FPRXV04.8	5		
23.7		4	4	FPRXV04.8	5		

| | | |

[illegible]	You Save $	You Spend	City CO2 R	Hwy CO2 R	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		1500	441	315	384			
		2000	473	326	407			
		1500	440	322	387			
		2000	466	329	404			
		2000	449	331	396			
		2000	473	340	413			
		2000	462	338	406			
		2500	482	336	416			
		2500	480	341	417			
		2500	487	344	423			
		1500	433	315	380			
		2000	465	328	404			
		2000	455	328	398			
		2000	469	328	406			
		2000	468	328	405			
		2000	472	335	410			
		5750	606	434	529			
		2000	464	337	407			
		2500	485	341	420			
		2500	483	350	423			
		2500	496	349	430			
		3250	518	363	448			
		3250	518	363	448			
	0		406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
		1250	517	351	442			
	0		406	279	349			
		1000	434	301	374			
		500	412	289	357			
		2000	458	334	402			
		1000	428	298	370			
		1500	453	324	395			
		4000	517	388	459			
		4000	537	382	467			
		2000	487	319	411			
		2500	494	331	421			
		2500	508	333	429			
		3250	517	336	436			
		4000	572	368	480			
		2500	508	333	429			
		4750	577	368	483			
		4750	583	372	488			
		4750	577	368	483			
		4750	583	372	488			

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
349.3	224.8	293.3	441.3	314.9	384.4
375.9	233.1	311.6	472.7	326.1	406.7
348.5	229.9	295.1	440.4	321.8	387.0
370.1	235.0	309.3	465.9	328.7	404.2
355.9	237.0	302.4	449.1	331.4	396.1
376.4	243.1	316.4	473.3	339.6	413.1
367.1	241.7	310.7	462.3	337.7	406.2
383.6	240.5	319.2	481.8	336.1	416.2
382.2	243.8	319.9	480.1	340.5	417.3
388.2	246.5	324.4	487.2	344.2	422.8
342.0	225.2	289.4	432.7	315.5	380.0
369.6	234.6	308.8	465.3	328.1	403.6
361.0	234.3	304.0	455.1	327.7	397.8
372.8	234.8	310.7	469.1	328.4	405.8
372.2	234.2	310.1	468.3	327.6	405.0
375.4	239.8	314.4	472.1	335.1	410.4
488.4	313.5	409.7	605.5	434.4	528.5
368.9	240.9	311.3	464.4	336.6	406.9
386.4	243.9	322.3	485.1	340.7	420.1
384.9	251.1	324.7	483.3	350.4	423.5
396.0	250.4	330.5	496.4	349.4	430.2
414.1	260.8	345.1	517.8	363.4	448.3
414.1	260.8	345.1	517.8	363.4	448.3
319.0	198.1	264.6	405.5	279.0	348.6
343.5	214.2	285.3	434.5	300.7	374.3
324.5	205.6	271.0	412.0	289.1	356.7
363.4	239.0	307.4	458.0	334.1	402.2
338.0	212.4	281.5	428.0	298.2	369.6
359.2	231.2	301.6	453.0	323.6	394.8
422.0	248.0	343.7	517.3	351.0	442.5
319.0	198.1	264.6	405.5	279.0	348.6
343.5	214.2	285.3	434.5	300.7	374.3
324.5	205.6	271.0	412.0	289.1	356.7
363.4	239.0	307.4	458.0	334.1	402.2
338.0	212.4	281.5	428.0	298.2	369.6
359.2	231.2	301.6	453.0	323.6	394.8
413.4	278.8	352.8	517.0	387.7	458.8
430.1	274.6	360.1	536.7	382.0	467.1
387.7	227.8	315.7	486.6	319.0	411.2
393.9	236.6	323.1	494.0	330.8	420.6
405.8	238.5	330.5	508.0	333.4	429.4
413.7	240.4	335.7	517.3	336.0	435.7
460.2	264.2	372.0	572.2	368.0	480.3
405.8	238.5	330.5	508.0	333.4	429.4
464.1	264.0	374.1	576.8	367.7	482.7
469.1	267.4	378.3	582.7	372.3	488.0
464.1	264.0	374.1	576.8	367.7	482.7
469.1	267.4	378.3	582.7	372.3	488.0

[redacted]	[redacted]	DISTANCE	Comb Vol Higher	Final Label	EPA_FUEL	EPA_GHG	EPA_AMT
	N		4.3	4.3			
	N		4.5	4.5			
	N		4.3	4.3			
	N		4.5	4.5			
	N		4.5	4.5			
	N		4.5	4.5			
	N		4.5	4.5			
	N		4.8	4.8			
	N		4.8	4.8			
	N		4.8	4.8			
	N		4.3	4.3			
	N		4.5	4.5			
	N		4.5	4.5			
	N		4.5	4.5			
	N		4.5	4.5			
	N		4.5	4.5			
	N		5.9	5.9			
	N		4.5	4.5			
	N		4.8	4.8			
	N		4.8	4.8			
	N		4.8	4.8			
	N		5.0	5.0			
	N		5.0	5.0			
	N		3.8	3.8			
	N		4.2	4.2			
	N		4.0	4.0			
	N		4.5	4.5			
	N		4.2	4.2			
	N		4.3	4.3			
	N		4.3	4.3			
	N		3.8	3.8			
	N		4.2	4.2			
	N		4.0	4.0			
	N		4.5	4.5			
	N		4.2	4.2			
	N		4.3	4.3			
	N		5.3	5.3			
	N		5.3	5.3			
	N		4.5	4.5			
	N		4.8	4.8			
	N		4.8	4.8			
	N		5.0	5.0			
	N		5.3	5.3			
	N		4.8	4.8			
	N		5.6	5.6			
	N		5.6	5.6			
	N		5.6	5.6			
	N		5.6	5.6			

EPA_UNRD

EPA_UNRI	EPA_UNRI	EPA_UNRI	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
					Mr Ross	Gatzke
					Mr Ross	Gatzke
					Mr Ross	Gatzke

mined)

2011 and Later PHEVs - data in EPA's Verify data base - plus driv

(Not Confidential)

2015 Model Year:

EPA Comments	Model Type Information					
EPA commVERIFY co	Model Yr	Mfr Name	Division	Carline	Verify Mfr	Index (Mo
PHEV; (non-blended)	2015	Porsche	Porsche	918 Spyder (Non-blended PHEV)	PRX	541
PHEV; (blended)	2015	Porsche	Porsche	Panamera S E-Hybrid (Blended PHEV)	PRX	641

(Sorted by Division Name)

ing range & utility factor information

			Charge Sustaining Information (Gasoline Operation)						
Eng Displ	# Cyl	Trans as I	City FE (G	Hwy FE (C	Comb FE	City Unad	Hwy Unad	Comb Un	City Unrd
					2015 Porsche 918 Spyder PHEV				
4.6	8	Auto(AM-S	20	24	22	28.6000	34.3000	30.9116	20.4000
			20	24	22	28.6000	34.3000	30.9116	20.4000
					2015 Porsche Panamera S E-Hybrid				
3.0	6	Auto(AM-S	23	29	25	28.9000	41.1000	33.3555	22.7000
			23	29	25	28.9000	41.1000	33.3555	22.7000

Charge Sustaining Information (Gasoline Operation)						
Hwy Unrd	Comb Unrd	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Oth	# Gears	Trans Loc
23.5000	21.7000		NA	Naturally A	AMS	Automated		7	N
23.5000	21.7000		NA	Naturally A	AMS	Automated		7	N
29.3000	25.2605		SC	Supercharg	AMS	Automated		8	Y
29.3000	25.2605		SC	Supercharg	AMS	Automated		8	Y

Trans Cre	Drive Sys	Drive Des	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag	Fuel Unit -	Fuel Unit I
			2015 Porsche 918 Spyder PHEV						
anual with paddles)	A	All Wheel I	10		420	GP	Gasoline (IMPG	miles per g	
anual with paddles)	A	All Wheel I	10		420	GP	Gasoline (IMPG	miles per g	
			2015 Porsche Panamera S E-Hybrid						
anual with paddles)	R	2-Wheel D	10		540	GP	Gasoline (IMPG	miles per g	
anual with paddles)	R	2-Wheel D	10		540	GP	Gasoline (IMPG	miles per g	

Vehicle Information						Ann Fuel Cost	
ahventional Fuel							
Gas Guzzl	Gas Guzzl	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu	Annual Fu	EPA Calcu
									2015 Porsche 918
N	Not exempt							2050	2050
N	Not exempt							2050	2050
									2015 Porsche Pan
N	Not exempt		108		16			1850	1850
N	Not exempt		108		16			1850	1850

Mfr Comm	Charge Depleting Information (Electricity Operation)								
ntionalEEqeCost - ConventionalFuelC - Annual fuel cost error. Please revise/Verify									
Comment	City2 FE (Hwy2 Fue	Comb2 Fu	City2 Una	Hwy2 Una	Comb2 Un	City2 Unr	Hwy2 Unr	Cmb2 Unr	
Spyder PHEV									
All-Electric	49	51	50	34.5000	35.5000	35.0000	49.3000	50.7000	50.0000
All-Electric	68	66	67	97.6956	94.9437	96.4378	68.266	66.333	67.3824
amera S E-Hybrid									
All-Electric	53	51	52	36.9000	35.7000	36.4000	52.8000	51.2000	52.1000
All-Electric	42	66	50	59.5000	94.5000	71.4000	41.6000	66.1000	50.0000

pleting Information (Electricity Operation)

Eve Alternative Fuel Range2	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit	Fuel2 Ann	City CO2 I	Hwy CO2	Comb CO:	Fuel2 EPA
					2015 Porsche 918 Spyder PHEV				
12	EL	Electricity	KW-HR/10	kilowatt-ho	2050				2050
12	EL	Electricity	MPG	miles per g	2050				2050
					2015 Porsche Panamera S E-Hybrid				
16	EL	Electricity	KW-HR/10	kilowatt-ho	1850				1850
16	EL	Electricity	MPG	miles per g	1850				1850

General Information							
Method Annual Fuel Cost - Alternative Fuel							
Descriptio	Intake Val	Exhaust V	Carline Cl	Carline Cl	Car/Truck	Calc Appr	Release	DEPA FE La
SIDI; PHE\	2	21	Two Seatecar		Plug-in Hyl	3/28/2014	16390
SIDI; PHE\	2	21	Two Seatecar		Plug-in Hyl	3/28/2014	16390
SIDI; PHE\	2	26	Large Carscar		Plug-in Hyl	7/3/2014	16525
SIDI; PHE\	2	26	Large Carscar		Plug-in Hyl	7/3/2014	16525

tion, etc.

date is after 8/2/2012)

Unique La	Label Rec	Relabel	Relabel D	Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve
	2015 Porsche 918 Spyder PHEV								
Y	N		N	N	N		N		Y
Y	N		N	N	N		N		Y
	2015 Porsche Panamera S E-Hybrid								
Y	N		N	N	N		N		Y
Y	N		N	N	N		N		Y

General Hybrid Vehicle Information - Engine, Motor/Generator, Battery Information, etc.

Var Valve	Var Valve	Var Valve	Energy St	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Energ
							2015 Porsche 918 Spyder PHEV		
Porsche V'Y	Porsche V'Battery(s)				1	Lithium Ion		384	17.70
Porsche V'Y	Porsche V'Battery(s)				1	Lithium Ion		384	17.70
							2015 Porsche Panamera S E-Hybrid		
Porsche V'Y	Porsche V'Battery(s)				1	Lithium Ion		471	75.00
Porsche V'Y	Porsche V'Battery(s)				1	Lithium Ion		471	75.00

etc.

ack(s)Amp-hrs) Batt Spec	Batt Char	Comment	# Capacit	Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell [	Usable H2
49.0	Both On-B			Electrical F		Both	N		
49.0	Both On-B			Electrical F		Both	N		
67.1	Both On-B			Electrical F		Both	N		
67.1	Both On-B			Electrical F		Both	N		

General Hybrid Vehicle Information - Engine, Motor/Generato

Fuel Cell-HEV-EV C	# Drive Mo	Motor Ger	Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete
			2015 Porsche 918 Spyder PHEV					
	2	DC Brushl		95 and 116		GDI		Spark Ignit
	2	DC Brushl		95 and 116		GDI		Spark Ignit
			2015 Porsche Panamera S E-Hybrid					
	1	DC Brushl		70		GDI		Spark Ignit
	1	DC Brushl		70		GDI		Spark Ignit

on - Engine, Motor/Generator, Battery Information, etc.

Fuel Desc	Fuel Cell V	Off Board	Camless V	Oil Viscosi	Stop/Start	Stop/Start	Model Typ	Charge De	Charge De	Charge Su
ect Injection	N	Y	N	0W40	Y	Yes		CD-2C	Charge DeCS-5C	
ect Injection	N	Y	N	0W40	Y	Yes		CD-2C	Charge DeCS-5C	
ect Injection	N	Y	N	0W40	Y	Yes		CD-2C	Charge DeCS-2C	
ect Injection	N	Y	N	0W40	Y	Yes		CD-2C	Charge DeCS-2C	

			FE & GHG Rating	#1 Smog Rating Test Group
Charge Sustaining (PHEVs only)	MFR Calculated	EPA Calculated	FE Rating (GHG Rating)	#1 Smog Rating
2015 Porsche 918 Spyder PHEV				
Charge Sustaining 5-cycle	31.4		7 (8)	FPRXV04.
Charge Sustaining 5-cycle	31.4		7 (8)	FPRXV04.
2015 Porsche Panamera S E-Hybrid				
Charge Sustaining 2-cycle	31.4		8 (9)	FPRXJ03.(
Charge Sustaining 2-cycle	31.4		8 (9)	FPRXJ03.(

#1 Smog Rating Test Group				#2 Smog Rating Test Group				#3 Smog Rating Test Group		
#1 Smog Rating (EPA Determined)	#1 Mfr Sm	#1 EPA Sm	SmartWay	#2 Smog R	#2 Mfr Sm	#2 EPA Sm	SmartWay	#3 Smog R	#3 Mfr Sm	#3 EPA Sm
								2015 Porsche 918 Spyder PHEV		
5										
5										
								2015 Porsche Panamera S E-Hybrid		
5										
5										

ng Test Group	#4 Smog Rating Test Group	You Save/You Spend	Gasoline Adjusted CO2		
	[illegible]	$ You Save	$ You Spe	City CO2 R	Hwy CO2 R	Comb CO2
		750		434	376	408
		750		434	376	408
		1750		74	0	41
		1750		392	303	352

		PHEV Total Range				New fields added by D. Good		
PHEV	Battery Charge Time		PHEV Composite MPG			PHEV Composite CO2		
[illegible]	[illegible]	[illegible]	City PHEV	Hwy PHEV	Comb PHE	City CO2-P	Hwy CO2-I	CO2-PHEV
	2015 Porsche 918 Spyder PHEV							
277	3	420	26	29	28	289.6	261.5	277
277	3	420	26	29	28	289.6	261.5	277
	2015 Porsche Panamera S E-Hybrid							
229.0	3.0	540	28	36	31	260.244	191.465	229
229.0	3.0	540	28	36	31	260.244	191.465	229

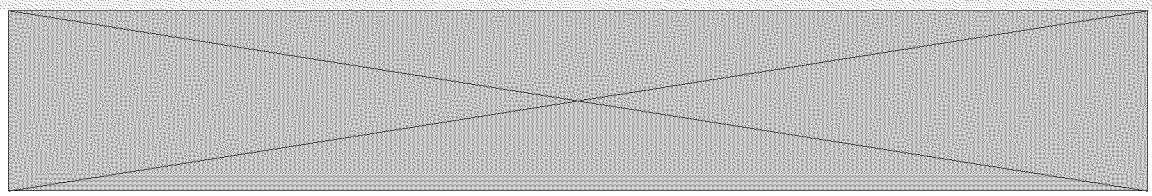
New fields added by D. Good

Charge Depleting Driving Range			Individual Utility Factors (Rcda PHEV UF)			Charge Depleting Fuel Consumption		
[illegible]	[illegible]	[illegible]	City Utility	Hwy Utility	Comb Utility	City (gal/1	Hwy (gal/1	Combined
			2015 Porsche 918 Spyder PHEV					
12.97	11.76	12	0.3339	0.3093	0.3229	0	0	0
Electric Range = 12 miles (combined)			0.3339	0.3093	0.3229	0	0	0
			2015 Porsche Panamera S E-Hybrid					
16.01	15.58	16	0.391	0.383	0.387	0.8667	0.0003	0.5
All Electric Range = 0-15 miles (combined)			0.391	0.383	0.387			

sted on blended PHEV labels

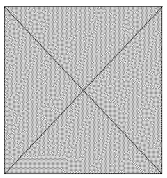
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 8/19/2014 4:05:21 PM
Subject: Green Car Report Daily Headlines

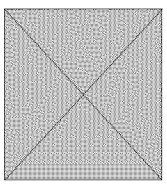
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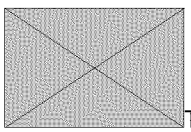
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2016 Chevy Volt Price, VW XL1 Influence, Electric-Car Range Logic: Today's Car News

Aug 19, 2014 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

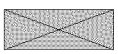


Today's news is all about the future. A low-priced 2016 Chevrolet Volt has the potential to undercut plug-in hybrids while, further out, technology from the Volkswagen XL1 may influence the next Golf compact. We've also received a study saying consumers should stick to 100-mile electric cars, but will they heed that advice? Or wait for cars with...

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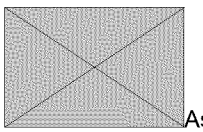






What It Takes To Build A Tesla Supercharger DC Fast-Charging Site

Aug 19, 2014 02:30 pm | feedback@highgearmedia.com (Stephen Edelstein)



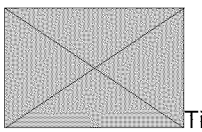
As more public charging stations are built, electric-car drivers have access to increasingly-large areas of the U.S. Owners of the Tesla Model S plug-in car largely rely on the company's Supercharger network, which can now facilitate a cross-country trip on one route, with more

to come. But what does it actually take to build a Supercharger...

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2015 Ford Fusion: Smaller EcoBoost Engine, Manual Gearbox Gone

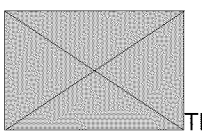
Aug 19, 2014 02:23 pm | feedback@highgearmedia.com (John Voelcker)

 Time was when mid-size sedans routinely came with V-6 engines of 3.0 to 3.6 liters. But these days, those are rare and expensive high-end options--if they're even offered at all. The 2015 Ford Fusion sedan now has a simplified lineup of engines, and all of them continue to have just four cylinders--but one has gotten smaller. When the redesigned...

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Could Less-Pricey 2016 Chevy Volt Undercut Plug-In Hybrids?

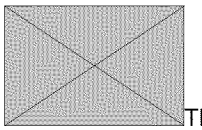
Aug 19, 2014 01:22 pm | feedback@highgearmedia.com (John Voelcker)

 The average new vehicle transaction price in the U.S. today is around $32,000. Now it appears that the upcoming 2016 Chevrolet Volt may possibly have two model variants, one of them targeting a base price of $30,000. That price could potentially equal--or undercut--every plug-in hybrid offered today by Ford, Honda, and Toyota, while still possibly...

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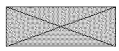
Next-Generation VW Golf Looks To XL1 Eco Car For Better MPG

Aug 19, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 The Volkswagen XL1 is a high-technology, high-cost plug-in hybrid that, while intriguing, will do very little do directly change the automotive landscape. Like many such projects though, lessons learned from its development and status as a rolling economy experiment could help production vehicles--the next-generation Volkswagen Golf, for one. The...

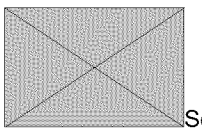
comments | read more





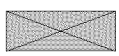
You're Better Off Buying 100-Mile Electric Cars, Report Says; Shoppers May Disagree

Aug 19, 2014 12:22 pm | feedback@highgearmedia.com (John Voelcker)

 Sometimes mathematical logic is simply swept aside by the more primal emotions: fear, anxiety, and insecurity. Which is why so many car buyers make choices that cost them money in the long run. Some of those choices may be luxury items they want but don't need; others may be capabilities they'll rarely, if ever, use but want to have in case of...

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Update your profile

To: Ueno, Christine[CUeno@hatci.com]
Cc: D'Ambrosi, Anthony[ADAmbrosi@hatci.com]; Shin, Seungwon (Simon)[seungwon@hatci.com]
From: Good, David
Sent: Tue 8/19/2014 6:52:17 PM
Subject: RE: 2015 Printed FE Guide - Soul EV FE Label (window sticker)

Christine,

Thanks much for the calculator.

Please send me a copy of the Soul Electric FE Label (window sticker) when you get a chance.

Dave

From: Ueno, Christine [mailto:CUeno@hatci.com]
Sent: Tuesday, August 19, 2014 11:28 AM
To: Good, David
Cc: D'Ambrosi, Anthony; Shin, Seungwon (Simon)
Subject: RE: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

Good morning, Dave –

Attached here is the chart for the 2015 MY Kia Soul EV that you had requested yesterday. Since these that are in Verify, we are not intending to complete the placeholder chart for this vehicle that was sent out yesterday afternoon.

Any questions, please let me know.

Thank you,

Christine Ueno

Hyundai-Kia America Technical Center, Inc.
Certification and Compliance

6800 Geddes Rd, Superior Twp., MI 48198

Office : (734) 337-3191

Cell : (734) 507 1233

E-mail: *cueno@hatci.com*



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From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, August 18, 2014 3:06 PM
To: richard.thomas@vw.com; kachuen.wong@bmwna.com; thomas.hofmann@bmwna.com; asw9@chrysler.com; j.foor@chrysler.com; Dave Barker; elarue1@ford.com; jcusuman@ford.com; deborah.a.zielesch@gm.com; laura.l.parker@gm.com; Bill Beggs; Darin_Johnson@AHM.Honda.com; peter_meier@ahm.honda.com; D'Ambrosi, Anthony; Ueno, Christine; rseal3@jaguar.com; vvarjabe@jaguar.com; vvarjabe@jaguarlandrover.com; kareen.toussagnon@daimler.com; markus.loesch@daimler.com; roland.mulde@daimler.com; john.gantchar@na.mitsubishi-motors.com; david.patterson@na.mitsubishi-motors.com; KhanF@NRD.NISSAN-USA.COM; ross.gatzke@porsche.us; drobertson@mazdausa.com; nokawa@mazdausa.com; kiriri@nano.tec.toyota.co.jp; Masahiro Konno; gbuffali@volvocars.com; plennvi@volvocars.com; snagaraj@teslamotors.com; oliver.schmidt@vw.com; james@teslamotors.com; Jackey Chen; Scott Hu; Ott, William; Pidgeon, Bill; Snyder, Jim; Ball, Joel; Dalton, Joel; Anderson, Tom; Wright, DavidA; Wehrly, Linc
Subject: Re: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

To manufacturers FE Label contacts,

When you get a chance, please send me an excel spreadsheet with any placeholders for the 2015 Printed FE Guide for vehicles which will be labeled AFTER Aug 27, 2014 (and won't have FE Label data in Verify by that time).

I need any placeholders for any conventional hybrids, EVs, PHEVs, fuel cell vehicles, diesels, FFVs, CNG vehicles and alt fuel vehicles. Attached is a generic Excel spreadsheet which you can use to email your placeholder information to me.

[I don't need placeholder information for vehicles which already have 2015 FE Label information entered in Verify.]

I need your placeholders as soon as possible, no later than Tuesday, Aug 26, 2014 COB.

Note: I'll send a separate email message to each individual manufacturer with the data in Verify as of Aug 15,2014 for your review. The last page of the attached EPA guidance letter outlines the timeline for the 2015 Printed FE Guide. [Labor Day is approaching fast.]

Thanks

Dave

To: Snyder, Jim[Snyder.Jim@epa.gov]
Ex. 7
Sent: Tue 8/19/2014 7:47:53 PM
Subject: Volkswagen Telephone Conference Call

Hello Jim:

I spoke with Hannah this morning and they still have an open point regarding Ex. 4 - CBI
Ex. 4 - CBI We would appreciate it if we could have a brief telephone conference. I think that this would be 30 minutes or less. Would you and the appropriate EPA staff be available Friday (08/22/14), Monday (08/25/14), or Tuesday (08/26/14). A morning call would be preferred (before 11:00 a.m.) to accommodate the time change with Germany.

Again, this is a test specific topic.

Best regards,

Ex. 7

Ex. 7

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Ex. 7

E-Mail: Ex. 7

To: Jeff.Giuseppe@dot.gov[Jeff.Giuseppe@dot.gov]; Good, David[good.david@epa.gov]
Cc: Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov];
t.letkiewicz.ctr@dot.gov[t.letkiewicz.ctr@dot.gov]
From: Harry.Thompson@dot.gov
Sent: Tue 8/19/2014 9:39:00 PM
Subject: Copy re 2012 VW & Porsche CAFE
NCC ltr to VW 080814.pdf

Please see the attached.

Mr. Oliver Schmidt
General Manager
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

AUG - 8 2014

Re: MY 2012 CAFE reporting for Volkswagen and Porsche

Dear Mr. Schmidt:

This responds to your letter of January 31, 2014, to Claude Harris stating that Volkswagen Group of America, Inc. (hereafter, "VW") and Porsche Cars North America (hereafter, "Porsche") should not be required under NHTSA's regulations to report their Corporate Average Fuel Economy (CAFE) compliance jointly for model year (MY) 2012. According to your letter, both VW and Porsche typically designate their model years as beginning on June 1 of each calendar year and ending on May 30 of the following calendar year, and that therefore VW and Porsche define their "MY 2012" as having ended on May 30, 2012. Given that VW and Porsche did not establish their control relationship until August 1, 2012, you believe that a control relationship did not exist for purposes of VW and Porsche's MY 2012, and that NHTSA should interpret 49 CFR Part 534 to confirm this belief.

We disagree.

The relevant section of the applicable regulation, 49 CFR § 534.5(b), states:

> (b) A manufacturer is considered to be within a control relationship for an entire model year if and only if it is within that relationship on September 30 of the calendar year in which the model year ends.

Porsche and VW both considered their MY 2012 to have ended on May 30, 2012. Porsche and VW do not dispute that VW's parent company, Volkswagen Aktiengesellschaft ("VW AG") acquired a 100 percent interest in the parent company of Porsche Cars North America ("PCNA") on August 1, 2012. We therefore observe these facts: 1) Porsche and VW state that their 2012 model years ended on May 30 of the 2012 calendar year, 2) Porsche and VW were in a control relationship on September 30, 2012, and 3) May 30, 2012 and September 30, 2012 both fall within the 2012 calendar year. Application of these facts to the plain language of § 534.5(b) appears to compel the conclusion that VW and Porsche's fleets must be combined for the 2012 model year.

Your January 31, 2014 letter contends that the VW and Porsche fleets should be combined for the 2013 model year and not before. In support of that position, you state that because the term "model year" is not defined in Part 534, what constitutes a "model year" is determined by 49 U.S.C. § 32901(a)(16). That provision defines "model year" as "(A) the annual production period of a manufacturer, as decided by the Administrator [of EPA], that includes January 1 of that calendar year; or (B) that calendar year if the manufacturer does not have an annual production period." Although your letter does not assert that the EPA Administrator has ever made a decision of what constitutes a "model year," for VW, Porsche or any other manufacturer, you state that applying § 32901(a)(16)'s definition of "model year" establishes that the 2013 model year for Porsche and VW began on June 1, 2012 and ended on May 30, 2013.

VW further contends that because August 1, 2012 – the date on which it gained control of Porsche – fell within the period it designated as its 2013 model year, NHTSA should disregard the fact that the control relationship existed on September 30, 2012. Instead, VW urges that the agency should acknowledge that the control relationship was formed during VW's 2013 model year, that the company's 2013 model year ended on May 30, 2013 and that the operative date for the purposes of § 534.5(b) is September 30, 2013 and not September 30, 2012.

Your January 31, 2014 letter also disputes the applicability of the model year definition contained in the agency's January 13, 2014 letter. In that letter, NHTSA took the position that a CAFE model year begins on October 1 of the year preceding the calendar year that corresponds to the model year and ends on September 30 of that corresponding calendar year. VW states that this definition of model year applies only in the context of determining when NHTSA must issue new fuel economy standards to meet the lead time requirements incorporated in the statutory scheme. In VW's view, imposition of this definition of model year outside the realm of standard setting is in direct conflict with § 32901(a)(16) and the existing compliance scheme.

The agency agrees that imposition of a definition of "model year" employed for the purposes of standard setting appears to be inapposite. We also note that application of the plain meaning of § 534.5(b) under a scenario where VW and Porsche's 2012 model year actually ended on May 30, 2012 would compel the merger of two fleets for a model year that ended prior the actual formation of a control relationship. Examination of the regulatory history of Part 534 does not reveal whether the agency intended such a result. However, resolving the issue before us does not require examination of either proposition because VW's 2012 model year did not end prior to its obtaining control over Porsche.

If, as VW contends, the definition of "model year" found in § 32901(a)(16) applies here, § 32901(a)(16)(A) defines "model year" as "(A) the annual production period of a manufacturer, as decided by the Administrator [of EPA], that includes January 1 of that calendar year . . . Although EPA has not issued a rule defining the annual production period

of a manufacturer, it has offered guidance on this subject. An EPA Office of Mobile Sources (OMS) Advisory Circular issued on December 31, 1987 (copy enclosed) defines the annual production period of a manufacturer as follows:

> E. Definition of Production Period
>
> The "annual production period" for any specific model within an engine family of light-duty vehicles or heavy- duty engines begins either: (1) when such vehicle or engine is first produced, or (2) on January 2 of the calendar year preceding the year for which the model year is designated, whichever date is later. The annual production period ends either: (1) when the last such vehicle or engine is produced, or (2) on December 31 of the calendar year for which the model year is named, whichever date is sooner.

Although VW's January 31, 2014 letter states that the both VW and Porsche established the 2012 model year as beginning on June 1 2011 and ending on May 30 2012, footnote 1 of that letter states that a 2012 model year VW vehicle was in production after August 1, 2012 - the date that VW obtained 100 percent ownership of Porsche. Therefore, under the EPA Advisory Circular identified above, VW's 2012 model year had not ended and the VW and Porsche fleets should be merged for that model year.

NHTSA also observes that your January 31, 2012 letter is silent in regard to the dates on which 2012 model year VW or Porsche vehicles manufactured outside the United States were actually imported into this country. Section 32904(a)(1)(B) directs that a manufacturer's fuel economy is calculated through use of a formula employing the number of passenger automobiles of each model manufactured by the manufacturer in that model year. Section 32901(a)(13) defines "manufacture" as "to produce or assemble in the customs territory of the United States or to import" (emphasis added). Therefore, for CAFE purposes, the production date of an imported vehicle is of little moment. The more critical date is the date on which the vehicle actually entered the United States.

The EPA Advisory Circular discussed above recognizes the important distinction between "production" for Clean Air Act purposes and importation for CAFE purposes. Because a vehicle produced outside the United States is not "manufactured" until it is imported, Subsection G of the EPA Advisory Circular contains specific guidance for counting vehicles manufactured outside of the US:

> The resultant definition of "model year" for CAFE purposes is equivalent to the definition for certification purposes for all vehicles except for those produced before December 31 of the calendar year for which the model year is named but not actually imported until after December 31 of that year. These vehicles . . . are included in that model year for certification because they were produced before December 31 of that year. However, they must be included in the subsequent model year CAFE calculation, as they were not "manufactured" (i. e. ,

imported) until after the expiration of that year. As an example, consider the case of a 1987 model year vehicle "produced" on December 15, 1987 but not "imported" until January 21, 1988. This vehicle would still be covered by the 1987 certificate, as it was produced before December 31 of the calendar year for which the model year is named. However, it must be included in the 1988 model year CAFE calculations, as it was imported, and thus "manufactured" for CAFE purposes, after the expiration of the 1987 calendar year.

Other than alluding to the fact that the 2012 Audi Q5 continued in production outside of the United States after the date on which VW acquired 100 percent ownership in Porsche, your January 31, 2014 letter does not address when other 2012 Porsche or VW models produced outside of the United States were actually imported into the United States.

Examination of Customs and Border Protection (CBP) records indicates that both VW and Porsche imported 2012 model year vehicles after August 1, 2012. Some of these vehicles entered the United States as late as December 2012. Under the definition of "manufacture" contained in § 32901(a)(13), the importation of these 2012 model year vehicles after August 1, 2012 compels the conclusion that VW obtained control of Porsche during the 2012 model year and not, as your letter contends, the 2013 model year.

We ask that VW and Porsche file a combined year-end report with the EPA for MY 2012 as soon as is practicable.

Please contact Mr. Otto Matheke of NHTSA's Office of Chief Counsel if you have any comments or questions. Mr. Matheke can be reached by telephone at (202) 366-5253.

Sincerely yours,

Original Signed By

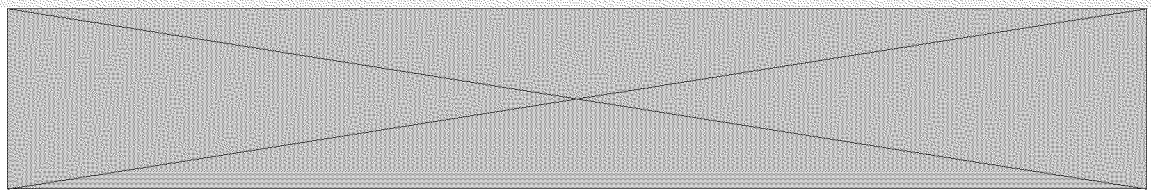
O. Kevin Vincent
Chief Counsel

Enclosure

cc: Mr. Walter J. Lewis, Manager
Regulatory Affairs
Porsche Cars North America, Inc.
980 Hammond Drive
Atlanta, GA 30328

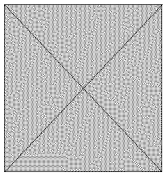
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Wed 8/20/2014 4:04:11 PM
Subject: Green Car Report Daily Headlines

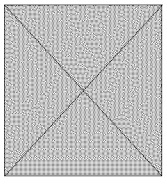
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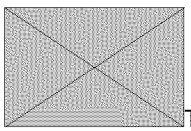
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Tesla News Video, VW 'XL2' Rumored, Hydrogen Stories: Today's Car News

Aug 20, 2014 03:15 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today's news spans three types of powertrain. We recap the last two weeks of whirlwind Tesla news on video, explain our reasoning for writing about hydrogen fuel-cell cars, and delve into rumors of a four-seat Vollkswagen "XL2" diesel plug-in hybrid. All this and more on Green Car Reports. The Renovo Coupe pairs an iconic design--think AC...

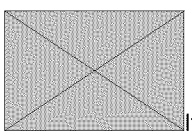
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Why Green Car Reports Writes About Hydrogen Fuel-Cell Cars

Aug 20, 2014 02:53 pm | feedback@highgearmedia.com (John Voelcker)

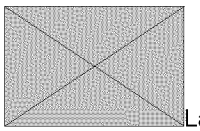
 It would seem pretty obvious that a site called Green Car Reports would cover zero-emission vehicles that will soon go on sale from major global automakers. But cars powered by hydrogen fuel cells turn out to be as controversial as plug-in electric cars, albeit for different reasons--and among different constituencies. So

it's appropriate to...

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First 2014 Mercedes-Benz B-Class Electric Drive Sold Last Month

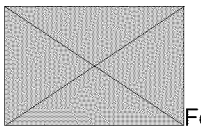
Aug 20, 2014 01:34 pm | feedback@highgearmedia.com (John Voelcker)

 Last month, 41 Mercedes-Benz B-Class Electric Drive hatchbacks were delivered to their owners, marking the first month of sales for the first battery-electric vehicle from the German luxury maker. The official first buyer, Kim Price, lives south of Los Angeles in Mission Viego; she's been a Mercedes driver for 15 years. DON'T MISS: 2014...

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Four-Seat Volkswagen 'XL2' Diesel Plug-In Hybrid Coming?

Aug 20, 2014 12:46 pm | feedback@highgearmedia.com (John Voelcker)

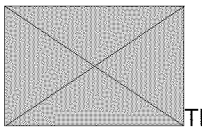
 For a two-seat car priced at more than $100,000, not sold in North America, and with just 250 built, the Volkswagen XL1 gets an extraordinary amount of attention. That's due to the hugely high fuel-economy ratings for the tiny carbon-fiber vehicle powered by a diesel plug-in hybrid system. It's rated at a combined 261 miles per gallon on the...

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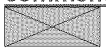
Tesla News: Model S Warranty, Gigafactory Fight, New Roadster Battery (VIDEO)

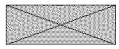
Aug 20, 2014 12:03 pm | feedback@highgearmedia.com

(John Voelcker)

 The Silicon Valley electric-car maker Tesla Motors seems to be in the news almost every day. Over the last two weeks, the company faced fallout over glitches in early Model S cars, and upgraded its powertrain warranty. It also turned the screws on states competing for its multibillion-dollar battery gigafactory. The company even worked on hiring...

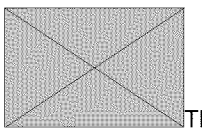
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Next Lincoln Navigator Likely To Get Aluminum Body For MPG Gains

Aug 20, 2014 12:00 pm | feedback@highgearmedia.com (Antony Ingram)

 The Ford F-150 pickup might be one of America's best-selling vehicles, but the move to build the 2015 model from aluminum has required significant investment from Ford. To ensure that investment is worth it, the company is likely to use aluminum in several other vehicles to spread the development cost--and the first of those could be the 2017...

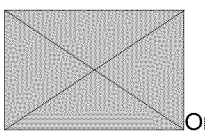
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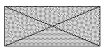
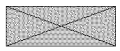


Renovo Coupe Pairs Iconic Design With Electric Performance: Video

Aug 20, 2014 11:30 am | feedback@highgearmedia.com (Antony Ingram)

 One indication that electric vehicles are clearly ready for the mainstream market is that they're already becoming desirable in the rarefied atmosphere of the supercar and sports car markets. The Renovo Coupe might not be much use for the average commuter--if only for budgetary reasons--but as a tool to demonstrate just what electric cars can do...

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Update your profile

.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Glas, Tobias
Sent: Wed 8/20/2014 4:56:06 PM
Subject: RE: 140517286

Hi Jim,

The Problem on the car was a pushed back pin that had some tools make a connection and some didn't.

The problem is solved and the customer is happy.

Thank you

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, July 29, 2014 1:10 PM
To: Glas, Tobias
Subject: RE: 140517286

Yes, I would appreciate it. It is not just me, he is calling Joel Ball and an OBD guy every day.

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Tuesday, July 29, 2014 1:08 PM
To: Snyder, Jim
Subject: RE: 140517286

Well, at least he is determined! If it is ok with you I'll contact him today to get him off your back.

Thanks

Tobias

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, July 29, 2014 1:07 PM
To: Glas, Tobias
Subject: RE: 140517286

Hi Tobias, I hope you were able to convince your regional manger how important it is to contact this guy, David Dalka quickly. He is calling and emailing several of us every day! He wants to know when he will hear from VW and what is your number so he can contact you (or the regional manager) directly.

If the OBD communication failure *is* because of a ECU-related problem then VW is obligated to

warranty it.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Snyder, Jim
Sent: Monday, July 21, 2014 2:12 PM
To: 'Glas, Tobias'
Subject: FW: 140517286

Hi Tobias, This guy (Dave Dalka) is stuck between the dealer and the state inspection place . His car has OBD communication issues at the state I/M and with a generic scantool but the dealer says its okay and won't do anything unless he pays for a diagnosis first. He's talked to several people and is getting anxious.

Thanks for looking into to it.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Ball, Joel
Sent: Thursday, July 17, 2014 3:54 PM
To: Snyder, Jim
Subject: FW: 140517286

Hi Jim,

Could you please contact VW. This individual's vehicle fails the state inspection in Illinois due to lack of communication with the testing equipment. However when he took the vehicle to the Volkswagen dealer they were able to communicate with their diagnostic equipment and found nothing wrong with the vehicle. He went back to the state inspection and failed again due to lack of communication. The state has told him that his vehicle is not working properly and needs to be fixed but VW won't fix it under warranty. His case # is 140 517 286

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

From: David Dalka [mailto Ex. 6
Sent: Tuesday, July 15, 2014 10:38 AM
To: Ball, Joel
Subject: Fwd: 140517286

Joel, I left you a voice mail earlier today. This is the issue mentioned. Please call me at your convenience at Ex. 6

Thank you.

---------- Forwarded message ----------
From: **David Dalka** Ex. 6
Date: Tue, Jul 15, 2014 at 9:34 AM
Subject: 140517286
To: vwcustomercare@vw.com

Dear Ian,

Thank you for your time today talking about my challenging problem. I appreciate your listening and compassion. I've mostly enjoyed the VW Rabbit so this situation is rather traumatizing to me as I feel rather stuck between the EPA, the state testing (which I've learned is done differently in every state and

As you know, the EPA mandates emissions repairs on all vehicles less than 8 years old or 80,000 miles on it (please review http://www.epa.gov/obd/pubs/420f09048.pdf). Despite the highly friendly best efforts of Conrad at City Volkswagen as an initial courtesy, which I deeply appreciated, we have not gotten to the root cause of the issue and the problem is not yet solved.

The car has failed 3 times so far. Unfortunately, I do not currently feel any closer to resolving this issue than when I started. As I'm currently unemployed, I do not have available resources to fund an open ended diagnosis. Nor should I have to. No car built to the right quality standards should even be having this problem at less than 40,000 miles on any car.

I feel stuck in a black hole between the EPA, the State of IL emissions testing, the dealer and VW corporate. The bottom line is that the OBD can't be read but the emissions testing place lacks the power to mandate a certain manufacturer repair and there is no way for me to do any of the following:

1) Know I'm focused on the right problem

2) A clear path to a no cost or cost effective solution - there is one repair shop in the region that allegedly charges $49 for a diagnosis and guarantees their repair work or your money back. The problem with that option is that as we discussed you won't accept their OBD determination.

I'd be forever appreciative if you could get upper VW management to fund the discovery that you suggest at City Volkswagen needs to do for us to proceed under the spirit of the warranty repair rather than the legalities of it. This action would restore my trust in a product I like overall an would likely make me a customer for life. Failure to fix it likely means I could never buy a VW in good faith again.

I look forward to your help in resolving this problem.Thank you.

David Dalka
Business Transformation Consultant / Facilitator / Keynote Speaker
Primary: Ex. 6

The content of this email is private unless otherwise noted.
Please excuse any typos from my mobile device

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Snyder, Jim
Sent: Wed 8/20/2014 5:30:40 PM
Subject: RE: 140517286

Yes, I heard it was just a connector issue. Thanks for getting this resolved. That guy was very insistent.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
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To: Snyder, Jim
Subject: RE: 140517286

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In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

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Phone: (248) 754-4211

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Fax: (248) 754-4207

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Compliance Division
United States Environmental Protection Agency
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snyder.jim@epa.gov

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Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

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To: Snyder, Jim
Subject: FW: 140517286

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Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

From: Ex. 6

Sent: Tuesday, July 15, 2014 10:38 AM
To: Ball, Joel
Subject: Fwd: 140517286

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Thank you.

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Date: Tue, Jul 15, 2014 at 9:34 AM
Subject: 140517286
To: vwcustomercare@vw.com

Ex. 6

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I look forward to your help in resolving this problem.Thank you.

Ex. 6

The content of this email is private unless otherwise noted.
Please excuse any typos from my mobile device

To: Linda Carrizosa[lcarrizosa@cafcp.org]; Zimpfer, Amy[Zimpfer.Amy@epa.gov]; robert.babik@gm.com[robert.babik@gm.com]; Byung Ki Ahn (bk.ahn@hyundai.com)[bk.ahn@hyundai.com]; Christian H. Mohrdieck (Christian.Mohrdieck@daimler.com)[Christian.Mohrdieck@daimler.com]; Clark E. Parker (clarkeparker@aqmd.gov)[clarkeparker@aqmd.gov]; Daniel Sperling (dsperling@ucdavis.edu)[dsperling@ucdavis.edu]; Janea Scott (janea.scott@energy.ca.gov)[janea.scott@energy.ca.gov]; Joerg Launer (Jorg.Launer@vw.com)[Jorg.Launer@vw.com]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Kenzo Oshihara (oshihak@nrd.nissan-usa.com)[oshihak@nrd.nissan-usa.com]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Sunita Satyapal Ph. D. (Sunita.Satyapal@ee.doe.gov)[Sunita.Satyapal@ee.doe.gov]; Thorsten Wesse (Thorsten.Wesse@afcc-auto.com)[Thorsten.Wesse@afcc-auto.com]; Ex. 7 Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Bill Elrick[belrick@CAFCP.org]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; John Juriga (jjuriga@hatci.com)[jjuriga@hatci.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]
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From: Linda Carrizosa
Sent: Wed 8/20/2014 5:49:20 PM
Subject: CONFIRMATION: Date to the CaFCP EB & ST Meeting is Oct 21 & 22, 2014

Good Morning Executive Board Members,

Please disregard the previous email stating a potential change in the Oct EB and ST Meeting dates. With the feedback we received we need to keep the originally scheduled **Oct 21st EB** and **Oct 22 ST** meetings. The locations are now confirmed as well. The meeting outlook invites will be updated/confirmed shortly with the following information:

1. **Oct 21, 2014 -** EB Meeting - Location: CEC, 1516 9th Street, Sacramento, CA – Hearing Room A

2. **Oct 22, 2014 -** ST Meeting - Location: CaFCP, 3300 Industrial Blvd, Ste. 1000, West Sacramento, CA

We are so sorry for any inconvenience in your scheduling this may have caused.

We look forward to seeing you all **Oct 21st for EB** and **Oct 22nd for ST**!

Please let me know if you have any questions.

Linda

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

From: Linda Carrizosa
Sent: Friday, August 15, 2014 6:42 PM
Subject: Update to CaFCP EB and ST Meetings for October 2014

Good Afternoon Everyone,

There was a proposal to move the EB/ST meetings from the currently scheduled dates of Oct 21 (EB) and Oct 22 (ST) to the following week, ~~**Oct 28 (EB) and Oct 29 (ST),** so we are making plans to hold the EB/ST meetings on **Oct 28th and 29th**. Please make us aware if you see any major problems with these new dates.~~

The meeting outlook invite will be updated shortly to reflect the ~~new~~ **original** dates for EB and ST Meetings, so please plan on the following:

1. **Oct 21, 2014** - Executive Board – Location: TBD: Sacramento, CA
2. **Oct 22, 2014** - Steering Team – Location: CaFCP, West Sacramento, CA

Thank you and please let me know if you have any questions.

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

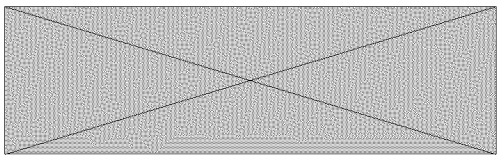
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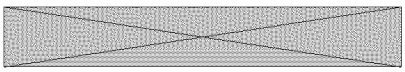
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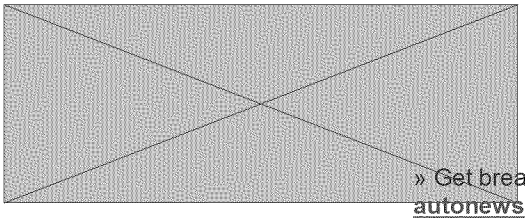
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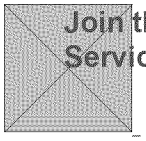
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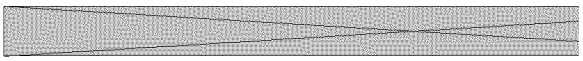
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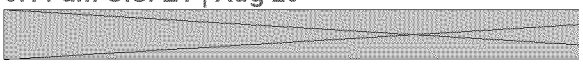
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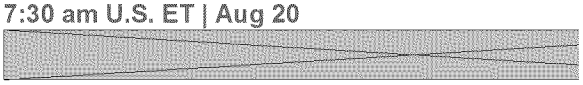
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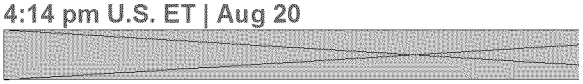
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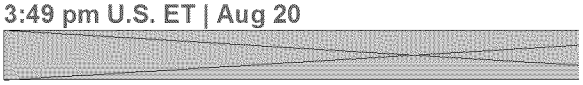
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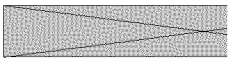


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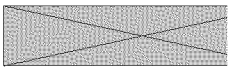
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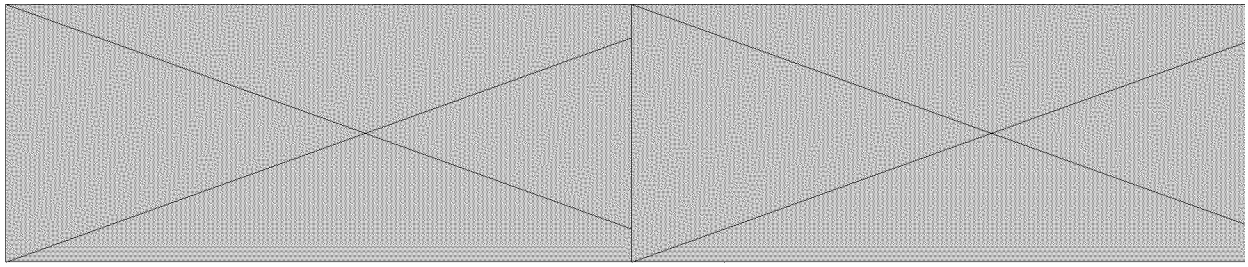
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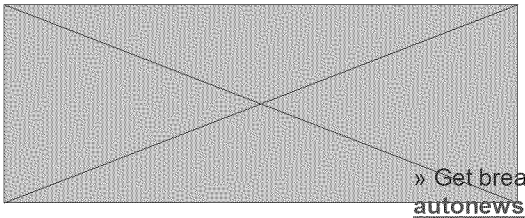
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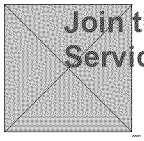
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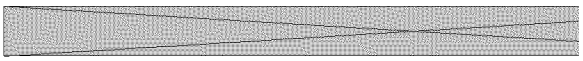
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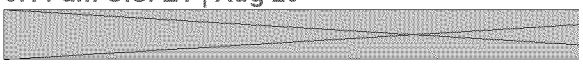
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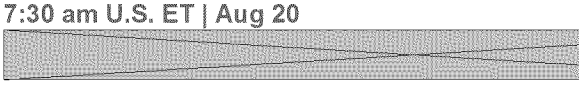
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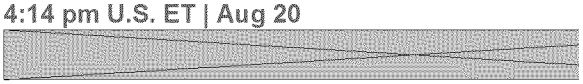
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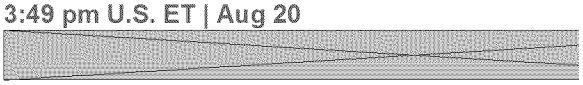
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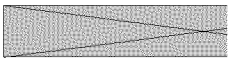


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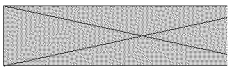
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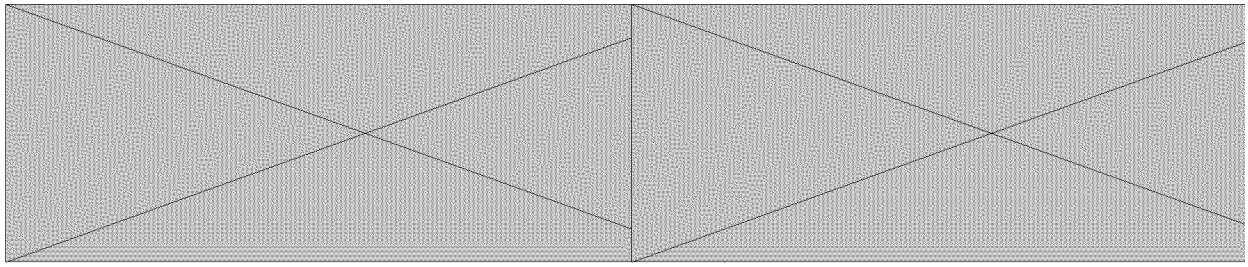
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To: Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Bill Elrick[belrick@CAFCP.org]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Joerg Launer (Jorg.Launer@vw.com)[Jorg.Launer@vw.com]; John Juriga (jjuriga@hatci.com)[jjuriga@hatci.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; r.modlin@chrysler.com[r.modlin@chrysler.com]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]; Thorsten Wesse (Thorsten.Wesse@afcc-auto.com)[Thorsten.Wesse@afcc-auto.com]
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From: Linda Carrizosa
Sent: Wed 8/20/2014 8:56:48 PM
Subject: DRAFT Aug 6 ST Decision and Assignments now availalbe on MR

Hello Everyone,

The Draft Aug 6 ST Decision and Assignments are now available on MR, located here:

http://cafcpmembers.org/membersonly/node/3896

Thank you,

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

To: Good, David[good.david@epa.gov]
Cc: David.zhou@byd.com[David.zhou@byd.com]; jackey[jackey.chen@byd.com]
From: scott.hu@byd.com
Sent: Thur 8/21/2014 9:09:32 AM
Subject: RE: 2015 Printed FE Guide -information for EVs which won抉 have FE Labels in Verify by Aug 27, 2014

Hi, Dave:

As follow, the value of Energy Consumption and Range are with 30% cap, is it the one you need?

EV

Carline Name	Veh. Class, Body Type Pass/Cargo Volume	Type of Battery	Trans Type	Motor Size Type	Energy Consumption (KW-hr/100mi) City	Hwy	Driving Range (miles)
BYD e6	LDV-2WD	Lithium Ion	Auto(A1)	90 kW AC permanent magnet	55	52	127

If there are any problems, pls contact me, thank you!

Best Regards!

Scott.hu 胡浩

Product Certification and Regulations Research Department | BYD America Auto Sales Division
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主题: Re: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

To manufacturers FE Label contacts,

When you get a chance, please send me an excel spreadsheet with any placeholders for the 2015 Printed FE Guide for vehicles which will be labeled AFTER Aug 27, 2014 (and won't have FE Label data in Verify by that time).

I need any placeholders for any conventional hybrids, EVs, PHEVs, fuel cell vehicles, diesels, FFVs, CNG vehicles and alt fuel vehicles. Attached is a generic Excel spreadsheet which you can use to email your placeholder information to me.

[I don't need placeholder information for vehicles which already have 2015 FE Label information entered in Verify.]

I need your placeholders as soon as possible, no later than Tuesday, Aug 26, 2014 COB.

Note: I'll send a separate email message to each individual manufacturer with the data in Verify as of Aug 15,2014 for your review. The last page of the attached EPA guidance letter outlines the timeline for the 2015 Printed FE Guide. [Labor Day is approaching fast.]

Thanks

Dave

To: icawdron@lotuscars.com[icawdron@lotuscars.com]; rocco.bellino@roush.com[rocco.bellino@roush.com]; peter.janosi@roush.com[peter.janosi@roush.com]; SOttaway@lotuscars.com[SOttaway@lotuscars.com]; snagaraj@teslamotors.com[snagaraj@teslamotors.com]; james@teslamotors.com[james@teslamotors.com]; Peter Montague[peter.montague@mclaren.com]; Scott Hu[scott.hu@byd.com]; Jackey Chen[jackey.chen@byd.com]; Apur Parikh[aparikh@codaenergy.com]
From: Good, David
Sent: Thur 8/21/2014 2:23:46 PM
Subject: FW: Re: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014
Generic-Placeholder_Info_EV-PHEV-etc-(dgood) for Printed Guide.xlsx
CD-14-15-FE 2015 Label Guidance.pdf

To several manufacturers,

Here's some more info for the 2015 Printed Guide. [I may have sent this message to you previously----but just in case I didn't…..]

Call or email me if questions.

Thanks

Dave

From: Good, David
Sent: Monday, August 18, 2014 3:06 PM
To: 'richard.thomas@vw.com'; 'kachuen.wong@bmwna.com'; 'thomas.hofmann@bmwna.com'; 'asw9@chrysler.com'; 'j.foor@chrysler.com'; 'Dave Barker'; 'elarue1@ford.com'; 'jcusuman@ford.com'; 'deborah.a.zielesch@gm.com'; 'laura.l.parker@gm.com'; 'Bill Beggs'; 'Darin_Johnson@AHM.Honda.com'; 'peter_meier@ahm.honda.com'; Tony D'Ambrosi; 'Christine Ueno'; 'rseal3@jaguar.com'; 'vvarjabe@jaguar.com'; 'vvarjabe@jaguarlandrover.com'; 'kareen.toussagnon@daimler.com'; 'markus.loesch@daimler.com'; 'roland.mulde@daimler.com'; 'john.gantchar@na.mitsubishi-motors.com'; david.patterson@na.mitsubishi-motors.com; 'KhanF@NRD.NISSAN-USA.COM'; 'ross.gatzke@porsche.us'; 'drobertson@mazdausa.com'; 'nokawa@mazdausa.com'; 'kiriri@nano.tec.toyota.co.jp'; 'Masahiro Konno'; 'gbuffali@volvocars.com'; 'plennvi@volvocars.com'; 'snagaraj@teslamotors.com'; 'oliver.schmidt@vw.com'; 'james@teslamotors.com'; 'Jackey Chen'; 'Scott Hu'; Ott, William; Pidgeon, Bill; Snyder, Jim; Ball, Joel; Dalton, Joel; Anderson, Tom; Wright, DavidA; Wehrly, Linc
Subject: Re: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs,

PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

To manufacturers FE Label contacts,

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[I don't need placeholder information for vehicles which already have 2015 FE Label information entered in Verify.]

I need your placeholders as soon as possible, no later than Tuesday, Aug 26, 2014 COB.

Note: I'll send a separate email message to each individual manufacturer with the data in Verify as of Aug 15,2014 for your review. The last page of the attached EPA guidance letter outlines the timeline for the 2015 Printed FE Guide. [Labor Day is approaching fast.]

Thanks

Dave

Toyota 2012 Placeholder Information for the EPA 2012 Printed Guide

EV

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Battery	Trans Type	Motor Size Type	EnergyConsumption (KW-hr/100mi)		Driving Range
					City	Hwy	(miles)
RAV4 EV	SUV-2WD	Lithium-Ion	Auto(A1)	115 kW AC Induction	NA	NA	NA

Availability:
Available for sale or lease nationwide in the late fall of 2014

Fuel Cell Vehicles

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Fuel Cell	Battery Size, Type	Trans Type	Motor Size Type	Fuel Type	Miles per Kilogram		Driving Range
							City	Hwy	(miles)
FCX Clarity	Midsize Hatchback - 101/13	PEM (Proton Exchange Membrane)	288 V Lithium-Ion	Auto(A1)	DC Permanent Magnet, brushless - 100 kW	Hydrogen	NA	NA	NA

Availability:
Available for lease in southern California in the late fall of 2014--limited availability

PHEV

Model Name	Veh. Class, BodyType, Pass/CargoVolume	Trans Type	Engine	No. of cyl	Motor	Battery Type	Fuel	Miles Per Gallon		Driving Range (miles)
								City	Hwy	
PRIUS Plug-in Hybrid	Midsize Hatchback - 94/22	Auto(AV) (CVT)	1.8L	4	18kW AC Induction	207 V Lithium-Ion	Gasoline	NA	NA	NA
							Electricity	NA	NA	NA

Availability:
Only available in selected areas of the U.S.

Diesel, HEV, FFV & Alt Fuel Vehicles

Model Name	Vehicle Class, Body Type, Pass/Cargo	Trans Type	No. of Cyl.	Engine	Fuel Type	Battery Type	Motor Size & Type	City MPG	Hwy MPG	Driving Range
X5 xDrive35d	SUV-4WD	Auto(S-6)	6	3.0 L	Diesel	N/A	N/A	N/A	N/A	N/A
ActiveHybrid 3	midsize, 4 dr, 102/10	Auto(S-8)	6	3.0 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A
ActiveHybrid 5	midsize, 4 dr, 106/13	Auto(S-8)	8	4.4 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A
ActiveHybrid 7L	large, 4 dr, 115/13	Auto(S-8)	8	4.4 L	Gasoline	374 V Lithium-Ion	40 kW AC Induction	N/A	N/A	N/A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2565 PLYMOUTH ROAD
ANN ARBOR, MICHIGAN 48105-2498

OFFICE OF
AIR AND RADIATION

August 12, 2014

CD-14-15 (LDV/LDT/ICI/LIMO)

SUBJECT: Fuel Economy Label Information for 2015 Model Year

Dear Manufacturer:

This information in this letter supplements the information provided in EPA guidance letter CD-13-14 issued on November 22, 2013. Enclosed with this letter is information designed to guide you in your 2015 model year fuel economy labeling program.

Enclosure 1

"Fuel Economy Supplementary Information for 2015 Model Year" contains information about the printed Fuel Economy Guide and about posting 2015 fuel economy data on the EPA/DOE website (www.fueleconomy.gov).

Enclosure 2

Enclosure 2 provides instructions for submitting information to EPA for the Fuel Economy Guide for alternative-fueled vehicles, CNG vehicles, electric vehicles, plug-in hybrid vehicles, and sport utility vehicles.

Enclosure 3

Enclosure 3 contains the timetable for inclusion of fuel economy label values in the 2015 model year printed Fuel Economy Guide.

If you have any questions about these instructions, please contact your certification team representative.

Sincerely,

Byron J. Bunker, Director
Compliance Division
Office of Transportation and Air Quality

Enclosures

cc: Dennis Smith, DOE

ENCLOSURE 1
to CD-14-15

Fuel Economy Supplementary Information for the 2015 Model Year

Annual Fuel Cost Estimates

Annual fuel cost estimates for 2015 model year fuel economy labels (window stickers of new vehicles) were provided in EPA guidance letter CD-13-14, November 22, 2013.

Fuel Economy Ranges to be placed on FE Labels

Fuel economy ranges to be used on 2015 model year fuel economy labels were provided in EPA guidance letter CD-13-14, November 22, 2013.

Fuel Economy Data to be Included in the Printed Fuel Economy Guide

EPA and DOE will publish the printed copy of the Fuel Economy Guide once per year, normally in November. The printed Guide will be distributed to automobile dealerships, libraries, credit unions, etc. and published as a PDF file on the web site www.fueleconomy.gov.

Unless otherwise instructed, EPA will forward to DOE all 2015 MY fuel economy label values in the EPA database on the date indicated in Enclosure 3. DOE is then responsible for printing and distributing the Fuel Economy Guide. If a manufacturer wishes to exclude a model type from the printed Guide, a request providing justification for the exclusion must be submitted in writing to EPA for approval.

Release Date

The manufacturer-specified "release date" in the VERIFY database should correspond to the date that the vehicle will be introduced into commerce. EPA will use this date to determine when fuel economy information for a model type should be released to the public and listed at www.fueleconomy.gov.

EPA/DOE Fuel Economy Web Site (www.fueleconomy.gov)

The EPA and the Department of Energy (DOE) maintain a website devoted to fuel economy and related information: www.fueleconomy.gov. The web site contains the 2015 MY fuel economy label information in the EPA database (as the data becomes available throughout the model year) , plus tips and general information about the fuel economy of passenger cars and light trucks. The website is normally updated four times a month (normally on the 1st, 9th, 15th and 23rd of the month). As mentioned above, EPA will use the manufacturer-provided Release Date to determine which data are available to post on the website. If you need a 2015 fuel economy label posted on www.fueleconomy.gov on a specific date and time (e.g. to coincide with a manufacturer's press release), please contact Dave Good of my staff at (734) 214-4450 or good.david@epa.gov.

EPA encourages automobile manufacturers (and dealers) to link their web sites to the EPA/DOE site, as a public reference for fuel economy of passenger cars and light-duty trucks.

VW FOIA, EPA 06/20/2017 2017-FFP_014694

Displaying "fueleconomy.gov" on FE Labels (Window Stickers)

As a reminder, EPA labeling regulations require the EPA/DOE website address to be listed on your fuel economy labels, ref. 40 CFR 600.302-12(b)(5).

Gas Guzzler Tax

If, according to your calculations, one or more of your model types are subject to the Gas Guzzler Tax, those model types are noted by the letter "G" in the engine description section of the Fuel Economy Guide.

The total amount of tax is determined by the Internal Revenue Service (IRS). The manufacturer is responsible to the IRS for reporting and paying the Gas Guzzler Tax. The amount of the Gas Guzzler tax is required to be shown on the label, as determined from the tax schedule shown in 40 CFR 600.513-08, unless the manufacturer has been granted an alternative tax rate schedule. However, the IRS may audit your records and make its own determination about your tax liability. If the IRS determines a different tax rate after the model year, you will not be required to re-label unsold vehicles.

Limousine Manufacturers

Under the Revenue Consolidation Act of 1991, limousine manufacturers or modifiers are subject to the Gas Guzzler requirements. Manufacturers or modifiers of such vehicles should obtain fuel economy labels for their vehicles and conversions and pay the appropriate tax to the IRS.

VW FOIA, EPA 06/20/2017 2017-FFP_014695

ENCLOSURE 2
to CD-14-15

Supplementary Instructions for Submitting Fuel Economy Information to EPA for the 2015 Fuel Economy Guide

1. Background Information

For the 2015 Fuel Economy Guide, EPA will list all gasoline, diesel and alternative fuel vehicles together. This will help consumers find alternative fuel vehicles and compare their fuel economy with gasoline vehicles more conveniently through "one stop shopping."

The 2015 Guide will also separately list the following advanced technology and alternative-fueled vehicles:

Hybrid-Electric Vehicles (HEVs)
Plug-in Hybrid-Electric Vehicles (PHEVs)
Hydrogen Fuel Cell Vehicles (FCVs)
Electric Vehicles (EVs)
Diesel Fueled Vehicles
Ethanol (E85) Flexible-Fueled Vehicles
Compressed Natural Gas (CNG) Vehicles
Liquefied Petroleum Gas (LPG) Vehicles

For dual-fueled vehicles, the gasoline mpg values for the vehicle will be listed in both the Gasoline section of the Guide and the appropriate alternative-fuel section of the Guide.

2. Listing New Technology and Alternative-Fueled Vehicles

Manufacturers should provide the information as specified in the FE Label module of EPA's Verify database for new technology and alternative-fueled vehicles.

For **flexible fueled and dual-fueled vehicles**, manufacturers should enter the data into the EPA Verify database for both fuels in the same model type index by clicking on the buttons to "Add Another Fuel Usage" and "Add Another Base Level Fuel Usage." For example, enter the gasoline test data in "Base Level Fuel Usage #1" and the E85 test data in "Base Level Fuel Usage #2." Please do not enter the gasoline and alternative fuel data using two separate index numbers.

For **compressed natural gas (CNG) vehicles**, manufacturers should provide the city, highway and combined fuel economy values in miles per gallon-equivalent, where one gallon-equivalent is equal to 121.5 standard cubic feet of CNG; ref. the "gasoline gallon equivalent" definition provided in 40 CFR 600.002.

For **electric vehicles and plug-in hybrid vehicles**, manufacturers should provide the city, highway and combined fuel economy/energy consumption values when operating on electricity in units of miles per gallon-equivalent and also kW-hr/100 miles, where one gallon of gasoline is equivalent to 33.705 kilowatt-hours of electricity; ref. the "gasoline gallon equivalent" definition provided in 40 CFR 600.002. In addition, please enter in the model type comments field (GL-4) the adjusted rounded driving range (miles) when operating on electricity for city (FTP) and

VW FOIA, EPA 06/20/2017 2017-FFP_014696

highway operation. For PHEVs, please enter in the model type comments field the multi-day individual utility factors for city, highway and combined (55% city/45%highway) operation.

When entering charge depleting data in the Test Information module of Verify, please enter MFR FE in units of miles per gallon (not in units of kW-hr/100 miles). If this is your first time entering EV and PHEV charge depleting data into EPA's Verify database, please email Dave Good (good.david@epa.gov) for an example template showing our preferred method of entering charge depleting test data into EPA's data base.

3. Placeholders for New Technology and Alternative-Fueled Vehicles Which will be Available Later in the 2015 Model Year

If the city and highway fuel economy values and driving ranges will not be available by August 27, 2014, manufacturers should submit the information in the tables below with the fuel economy and driving ranges listed as "NA" (not available). Please include the manufacturer/division name, carline name, transmission type, engine displacement in liters, engine number of cylinders, vehicle class, interior volume for 2-door, 4-door, hatchback models, and the cargo volume (if applicable). Please don't send placeholder information for vehicles which are already in EPA's Verify database. The information should be emailed to Dave Good at good.david@epa.gov on or before the date listed in Enclosure 3.

To provide placeholder information for **fuel cell vehicles**, manufacturers should provide an Excel file with the following information, plus a short explanation of the availability of the vehicles, as follows:

Model Name	Veh. Class, Body type, Pass/Cargo Volume	Trans Type	Type of Fuel Cell	Motor Type & Power	Energy Storage Device and Rating	Fuel Type	Miles Per Kilogram		Driving Range (miles)
							City	Hwy	
AB	Compact 2dr – 91/12	Auto (A1)	PEM	100 kW-AC Induction	144 Volt Nickel Metal Hydride	Hydrogen	NA	NA	NA
CD	SUV	Auto CVT	PEM	100 kW-DC Brushless	244 Volt Lithium Ion	Hydrogen	NA	NA	NA

Availability:

AB Fuel Cell vehicles are initially available in California and Arizona only.

CD Fuel Cell vehicles will be available nationwide (for lease only) in the late fall of 2014.

Additional information may also be included if necessary to describe your vehicles.

VW FOIA, EPA 06/20/2017 2017-FFP_014697

To provide placeholder information for **electric vehicles,** manufacturers should provide an Excel file plus a short explanation of the availability of the vehicles, as follows:

Carline Name	Veh. Class, Body Type, Pass/Cargo Volume	Type of Battery	Trans Type	Motor Size Type	Energy Consumption (KW-hr/100mi)		Driving Range (miles)
					City	Hwy	
AB Electric	Large Cars 4dr-113/13	Lead-Acid	Auto (A1)	95 KW AC Induction	NA	NA	NA
AB Electric	Large Cars 4dr-113/13	Nickel-Metal Hydride	Auto (A2)	45 KW AC Induction	NA	NA	NA
CD Electric	Subcompact 2 dr-85/11	Lithium-Ion	Auto CVT	62 KW DC	NA	NA	NA

Availability:

AB Electric vehicles are initially available to the U.S. Postal Service in California and Arizona only.

CD Electric vehicles will be available nationwide (initially for lease only) in the late fall of 2014.

Additional information may also be included if necessary to describe your vehicles.

To provide placeholder information for **other alternative fueled vehicles**, manufacturers should provide an Excel file with the following information:

Model Name	Vehicle Class, Body Type Pass/Cargo	Trans Type	No. of cyl.	Engine	Fuel Type	Miles Per Gallon		Driving Range (miles)
						City	Hwy	
AA	Compact 4dr - 95/11	Auto(A5)	4	1.8L	Dedicated CNG	NA	NA	NA
BB	SUV-4WD	Auto(A4)	8	5.3L	E85	NA	NA	NA
					Gasoline	NA	NA	NA

To provide placeholder information for **plug-in hybrid electric vehicles (PHEVs)**, manufacturers should provide an Excel file with the information from both the electric vehicle table above and the "other alternative fueled vehicle" table above.

4. Listing Driving Ranges for Alternative-Fueled Vehicles

The calculation of the EPA driving range should be based on the adjusted combined fuel economy label value (rounded to the nearest whole mpg value) as determined in 40 CFR 600.210-08(c), (d), and (e), as applicable, and the useable fuel tank capacity of the vehicle (rounded to the nearest tenth of a gallon). Manufacturers should enter the driving range(s), rounded to the nearest mile, in the model type driving range field in the Fuel Economy Label module of EPA's Verify data base.

If several fuel tank capacities are available for a vehicle, a manufacturer should enter the driving range, rounded to the nearest mile, for the smallest and largest fuel tank available for the vehicle. Manufacturers should enter this information in the "model type driving range" field in the Fuel Economy Label module of EPA's Verify database. For example, manufacturers should enter 'nnn' for a single driving range or 'nnn/nnn' for model types which are available with multiple fuel tank capacities.

VW FOIA, EPA 06/20/2017 2017-FFP_014698

For dual-fueled vehicles, manufacturers should provide the driving range of the vehicle when operated on gasoline or diesel fuel, and the driving range when operated on any alternative fuel.

For **ethanol vehicles,** manufacturers should determine the vehicle's driving range rounded to the nearest mile by multiplying the adjusted combined fuel economy label value (rounded to the nearest whole mpg) by the vehicle's useable fuel storage capacity (rounded to the nearest tenth of a gallon); ref. 40 CFR 600.311-12(j)(1).

For **CNG vehicles,** manufacturers should deter mine the vehicle's driving range rounded to the nearest mile by multiplying the adjusted combined fuel economy label value (rounded to the nearest whole mpg equivalent) by the vehicle's usea ble fuel storage capacity (rounded to the nearest tenth of a gasoline gallon equivalent); ref. 40 CFR 600.311 -12(j)(3). The CNG fuel tank capacity used to calculate the EPA driving range should be based on 80 percent of the nominal fuel tank capacity (using a slow fill rate) in order to account for the reduced fuel tank capacity, which results from a fast fill rate.

For **electric vehicles,** manufacturers should determine the adjusted city and highway driving range as outlined in Section 8 of SAE J1634, Electric Vehicle Energy Consumption and Range Test Procedure, as published October 2002,[1] ref. 40 CFR 600.311-12(j)(2). Manufacturers should determine the combined driving range (rounded to the nearest mile) by arithmetically averaging the adjusted city and highway driving ranges, weighted 0.55 (city) and 0.45 (highway). The driving ranges shall be adjusted to reflect actual in-use driving conditions using one of the methods described in 40 CFR 600.210-12(d)(3).

For **plug-in hybrid vehicles when operating on electricity,** manufacturers should determine the adjusted city, highway and combined driving range (rounded to the nearest mile) as outlined in the provisions of 40 CFR 600.311-12(j)(4). For example, manufacturers should determine the adjusted city and highway charge-depleting driving range values (rounded to the nearest mile) as outlined in SAE J1711, Recommended Practice for Measuring the Exhaust Emissions and Fuel Economy of Hybrid-Electric Vehicles, Including Plug-In Hybrid Vehicles, June 2010. Manufacturers should determine the combined driving range by arithmetically averaging the adjusted city and highway driving ranges, weighted 0.55 (city) and 0.45 (highway). The driving ranges shall be adjusted to reflect actual in-use driving conditions.

For **hydrogen fuel cell vehicles**, manufacturers should determine the vehicle's adjusted driving range rounded to the nearest mile by multiplying the adjusted combined fuel economy label value (rounded to the nearest whole miles per kilogram) by the vehicle's useable fuel storage capacity (rounded to the nearest hundredth of a kilogram); ref. 40 CFR 600.311-12(j)(5). The driving range shall be adjusted to reflect actual in-use driving conditions.

5. Battery Charge Time for Electric Vehicles and Plug-in Hybrid Vehicles

For **electric and plug-in hybrid vehicles,** manufacturers should determine the time it takes to charge a fully depleted battery using a 120 and 240 volt power source as outlined in the provisions of 40 CFR 600.311-12(k). For example, manufacturers should charge the battery to the point that the battery meets the manufacturer's end-of-charge criteria, consistent with the

[1] With prior EPA approval, manufacturers may use SAE J1634, revised October, 2012, to determine the combined driving range.

VW FOIA, EPA 06/20/2017 2017-FFP_014699

procedures specified in SAE J1634 for electric vehicles and in SAE J1711 for plug-in hybrid electric vehicles.

6. Comparable Classes

2WD SUV Classification: When labeling 2-wheel drive SUVs, please continue to use the same vehicle classification category as in past model years (even though 2-wheel drive SUVs equal to or less than 6000 lbs GVWR will be included in 2015 passenger car CAFEs). For fuel economy labeling purposes, EPA will require 2015 and later model year 2WD SUVs to continue to be included in the 2WD SUV comparable class based on the provisions of 40 CFR 600.315-08(a)(1) and 600.315-08(a)(2).

Special Purpose Vehicle Classification: The "Special Purpose Vehicle" class is to be used when a vehicle does not fit into the definition of any comparable class, ref. 40 CFR 600.315-08(a)(3)(i). This situation is expected to be rare, but may occasionally happen for some types of transit vans, camper vans, limousines, dune buggies, amphibious vehicles, or other special vehicles. In addition, if a vehicle has features that could apply to more than one comparable class, EPA will determine which class is more appropriate, ref. 40 CFR 600.315-08(a)(3)(ii).

7. Engine /Model Type Descriptors: Engine and model type descriptors are only needed to identify two otherwise identical model types (so that the customer can easily identify the model). Please enter any needed basic engine/model type descriptors in the Verify FE Label module "Model Type Descriptor" field (field GL-78.2). The engine/model type description should be clear and concise (30 characters or less). For example, a manufacturer could enter "4-valve" in the model type descriptor field to distinguish between otherwise identical 2-valve models. The use of an engine/model type descriptor is subject to EPA approval. Please leave this field blank, or enter N/A in this field unless needed to identify two (or more) otherwise identical model types.

8. Relabeling: When relabeling vehicles for reasons specified 40 CFR 600.507-12(a) and 600.314-08(e)(4), please revise the original Index with the revised FE label information and also revise the release date to the effective date when the FE Label was revised. Please include in the model type comment field the reason for relabeling. Note that the provisions of 40 CFR 600.314-08 require that label values must not change for entire model year, except for the reasons outlined in the provisions of 600.507-12(a) and 600.314-08(e)(4).

9. Adjusted Combined Fuel Consumption (gallons/100 miles): Please enter the Manufacturer-Calculated Adjusted Combined Model Type Fuel Consumption (GL-214) in units of U.S. gallons per 100 miles, calculated according to the provisions of 600.311-12(c) as revised in the 2017 greenhouse gas final rule (page 77 FR 62624, October 15, 2012). For example, fuel consumption should be based on the rounded adjusted combined MPG label value (not the unrounded adjusted combined MPG value), calculated as follows:

Adjusted Combined Model Type Fuel Consumption = (100/rounded adjusted combined MPG label value). Please use the voluntarily lowered MPG label value, if applicable.

10. Voluntarily Lowering MPG Values and Increasing CO_2 Values: As outlined in the provisions of 40 CFR 600.210-12(a), "Manufacturers may voluntarily lower fuel economy

values and raise CO_2 values if they determine that the label values from any method are not representative of the fuel economy or CO_2 emissions for that model type." We encourage manufacturers to use these provisions as necessary, so that potential customers will be provided with accurate and representative fuel economy and CO_2 information for each vehicle.

10.1 Calculating Voluntarily Increased CO_2 Values: If manufacturers voluntarily lower city, highway or combined mpg values, then the provisions of 40 CFR 600.210-12(a) require that CO_2 values be increased accordingly. EPA calculates voluntarily increased city, highway and combined CO_2 values based on 1) the unrounded adjusted mpg value, 2) the unrounded adjusted CO2 value, and 3) the rounded, voluntarily lowered mpg value, as outlined in the following example:

Given:
unrounded adjusted combined mpg = 21.6949 mpg
unrounded adjusted combined CO_2 = 408.4 grams/mile
voluntarily lowered combined Label mpg = 20 mpg

Then: Voluntarily increased combined CO_2 = (21.6949 mpg x 408.4 gpm) / 20 mpg = 443.01 gpm; which rounds to 443 grams/mile CO_2.

Similar calculations are used to calculate voluntarily increased city and highway CO_2 values.

Note that in some cases, the adjusted combined CO_2 values may need to be increased even though the adjusted combined mpg value is not lowered, e.g. when a city mpg or highway mpg value is voluntarily lowered which (due to rounding) doesn't result in the adjusted combined mpg being lowered.

VW FOIA, EPA 06/20/2017 2017-FFP_014701

ENCLOSURE 3
to CD-14-15

Timetable for 2015 MY Printed Fuel Economy Guide

Task	Significant Dates	Responsible Party
1. Obtain an EPA Certificate which covers all model types to be included in the Guide.	August 14, 2014	Manufacturer
2. Enter general label fuel economy values and any other related information required by the Guide into EPA Verify database for all model types to be included in the Guide.	August 14, 2014	Manufacturer
3. Provide EPA **"placeholder"** descriptions (as outlined in Enclosure 2) for alternative fuel vehicles which will not be available until later in the model year.	August 14, 2014	Manufacturer
4. Compile a list from Verify with all necessary information for model types to be included in the Guide for each manufacturer; send the list to an individual manufacturer for data accuracy review.	August 15, 2014	EPA
5. Complete review of all information provided in "4" above, make necessary corrections in the Verify database and notify EPA that the data in Verify is complete and accurate.	August 27, 2014	Manufacturer
6. Send the complete Guide information to DOE for printing.	August 28, 2014	EPA
7. EPA announces 2015 Guide via a Press Release	early October, 2014	EPA

Comparable Class Fuel Economy Ranges

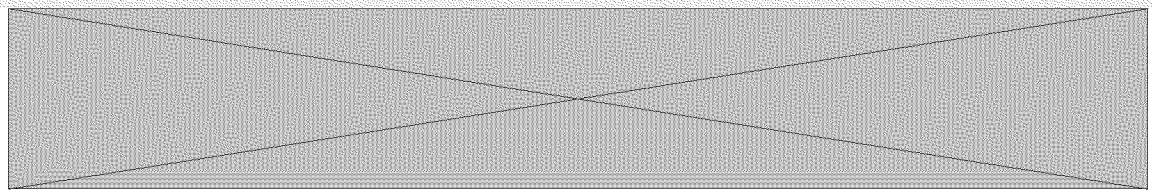
Task	Significant Dates	Responsible Party
1. Release the comparable class fuel economy ranges to be used on fuel economy labels to the manufacturers.	Previously provided in CD-13-14; will be updated in a November, 2014 guidance letter	EPA

EPA intends to include in the printed Guide, all available information which is submitted to EPA prior to August 28, 2014. August 27, 2014 is the last day for manufacturers to make changes to the EPA computer database.

VW FOIA, EPA 06/20/2017 2017-FFP_014702

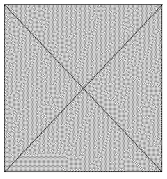
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Thur 8/21/2014 4:05:35 PM
Subject: Green Car Report Daily Headlines

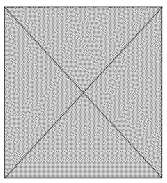
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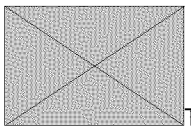
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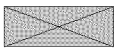
Ford Mustang MPG, Tesla Gigafactory, Electric-Car Battery Winner: Today's Car News

Aug 21, 2014 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today's news is all about technology. Leaked window stickers reveal fuel-economy ratings for the 2015 Ford Mustang EcoBoost, states compete to meet Tesla's "Gigafactory" criteria, and we delve into the complex all-wheel-drive Acura RLX Hybrid. All this and more on Green Car Reports. Struggling with financial issues, NEVS has revealed a prototype...

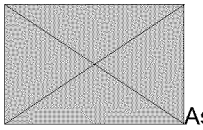
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2014 Honda CR-Z Hybrid Gets Factory-Approved Supercharger Kit

Aug 21, 2014 02:30 pm | feedback@highgearmedia.com (Antony Ingram)

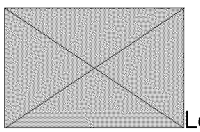
 Ask Honda fans what's wrong with the CR-Z hybrid coupe, and they'll give you one of two answers. Those who seek economy will tell you it's not frugal enough. Those after performance will tell you it isn't fast enough. Fixing the former probably requires a little too

much work for most, but thanks to HPD Street Performance you can at least give the...

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Battery Maker LG Chem: Biggest Electric-Car Winner Of All?

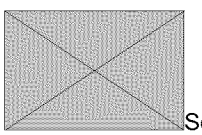
Aug 21, 2014 01:00 pm | feedback@highgearmedia.com (John Voelcker)

 Let's say your company builds a crucial, high-volume component for advanced-technology vehicles. Suppose it emerged this week that you've now got contracts to supply two of the world's three biggest automakers. That would put you in a good spot, wouldn't it? First GM, now VW Group Yesterday, LG Chem said it had secured a supply contract with Audi...

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2014 Acura RLX Hybrid: 3 Motors, AWD--Most Sophisticated Hybrid Yet?

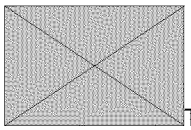
Aug 21, 2014 12:30 pm | feedback@highgearmedia.com (Antony Ingram)

 Several manufacturers now offer gas-saving hybrid versions of their vehicles but it's surprisingly rare to find two companies who have gone about it in the same way. The early pioneers, Toyota and Honda, fielded completely different systems at launch--and well over a decade down the line Honda has once again introduced a new hybrid system. Called...

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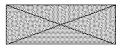
Tesla Battery Gigafactory: Speed, Incentives, Power-Line Proximity Crucial

Aug 21, 2014 12:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Tesla Motors' proposed "gigafactory" to make lithium-ion cells and battery packs for electric cars won't just benefit drivers; it will also benefit the state where it's located. With an estimated 6,500 jobs in the balance, the gigafactory is one of the larger job-creating manufacturing projects in recent years. Tesla originally named four...

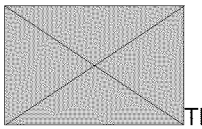
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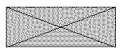
2015 Ford Mustang EcoBoost Gas Mileage: 26 MPG Combined: UPDATE

Aug 21, 2014 11:30 am | feedback@highgearmedia.com (Stephen Edelstein)

 The 2015 Ford Mustang has attracted plenty of attention for its 2.3-liter turbocharged EcoBoost four-cylinder engine--and not all of it positive. Fans of chest-thumping V-8s may scoff at such a downsized engine, but everyone else will likely want to know how efficient it is. While not strictly for fuel efficiency, the EcoBoost makes for...

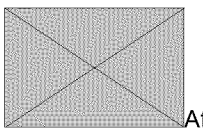
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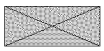
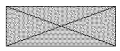


Prototype Electric Saab 9-3 EV Revealed By Struggling Owner NEVS

Aug 21, 2014 11:00 am | feedback@highgearmedia.com (John Voelcker)

 After Saab Automobiles vanished from the U.S. market three years ago, the bankrupt remains of the Swedish brand and its factory in Trollhattan were bought by a Chinese company. Its goal was to recast Saab as a maker of electric vehicles, and this week Swedish engineers presented a prototype of a Saab 9-3 running entirely on battery electricity...

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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
Cc: Vahakn Varjabedian[vvarjabe@jaguarlandrover.com]
From: Hall, George
Sent: Thur 8/21/2014 6:26:16 PM
Subject: Request for IUVP test data

Bill, as we discussed earlier:-
Can you supply me with the IUVP test results / data for:

Model Years

2011MY
2012MY
2013MY

Manufacturers (Veh Mfr Code):

Audi (ADX) - Volkswagen & Bentley data is not required
BMW (BMX) - Mini data is not required
Mercedes-Benz (MBX)

If it is easier to leave the additional data in than to remove it, it is not a problem.

If you require any more information from me, please get in touch via email or my mobile number below.

Thank you,

George.

George Hall
Project Engineer - IUVP & Emissions Compliance
T: +1.313.594.0904 | **M:** +1.313.670.1829

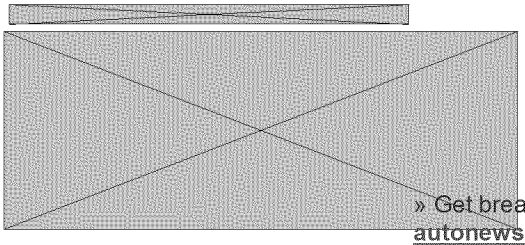
Jaguar Land Rover North America, LLC
555 Mac Arthur Blvd. Mahwah, NJ 07430
JaguarUSA | LandRoverUSA.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 8/21/2014 8:58:28 PM
Subject: DAILY: '15 Ford Mustang mpg slips as weight creeps up | Is Big Apple in Cadillac's future? | Kia reunites with hamsters to pitch Soul EV | Chevy adds pizzazz to high-volume Silverado models

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2015 Chevy Silverado to offer more pizzazz on high-volume models

August 21, 2014



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TOP NEWS

Leaked stickers suggest a thirstier 2015 Ford Mustang as weight creeps up

1:45 pm U.S. ET | Aug 21

Adding independent rear suspension, numerous electronic safety features and other items raised the weight and lowered the fuel economy of several models of the rebuilt 2015 Ford Mustang, according to window stickers leaked on the Internet today. ... » READ

Cadillac considers moving some staff functions to Manhattan

1:39 pm U.S. ET | Aug 21

Cadillac is considering adding or shifting some staff functions from Detroit to Manhattan, GM said today, as part of an effort to remake the brand's image and broaden its appeal outside North America under new boss Johan de Nysschen. ... » READ

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Honda to modify 12,000 redesigned Fits sold in U.S. to enhance crashworthiness

UPDATED: 8/21/14 3:05 pm ET - adds analyst comment
10:00 am U.S. ET | Aug 21

Honda plans to modify 12,000 redesigned 2015 Fit models in customer hands in the United States following a mid-model-year engineering change that improved the subcompact's showing in a key industry crash test. ... » READ

Kia brings back hamsters for Soul EV ad campaign

UPDATED: 8/21/14 2:00 pm ET - includes video
12:49 pm U.S. ET | Aug 21

Kia rolled out the new "fully charged" ad campaign for the Soul EV today, featuring Adam Levine's falsetto on the new Maroon 5 track "Animals" and, of course, the Kia hamsters. ... » READ

2015 Chevy Silverado to offer more pizzazz on high-volume models

UPDATED: 8/21/14 12:07 pm ET - adds details
9:00 am U.S. ET | Aug 21

Chevrolet will offer a bold new trim package on light-duty Silverado pickups for the 2015 model year, adding some pizzazz to its highest-volume models. ... » READ

ON THE BLOGS

RICHARD TRUETT

Is Ford rolling the dice with changes to 2015 Mustang?

» READ

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Falling used-vehicle values threaten

recovery

Porsche's record sales could endanger exclusivity, tech leadership

Dude, where's my Escalade?

Kia joins Bentley in wooing the 1% crowd at Pebble Beach

Honda's Mendel says U.S. sales 'near top,' warns market may suffer from 'stupid things'

Ford plans new hybrid series to compete with Toyota Prius, report says

6:11 pm U.S. ET | Aug 20

Ford tells U.S. dealers to stop selling some C-Max, Focus models

UPDATED: 8/21/14 4:39 pm ET - adds detail

11:05 am U.S. ET | Aug 21

New 2015 Lincoln MKC ads star Matthew McConaughey

UPDATED: 8/21/14 10:17 am ET - adds McConaughey video

8:00 am U.S. ET | Aug 21

UPCOMING EVENTS

» Sept. 23 - NY Marketing Seminar

» Oct. 15 - Best Dealerships To Work For

» Nov. 13-14 - Automobilwoche Kongress

» January 13-14 - Automotive News World Congress

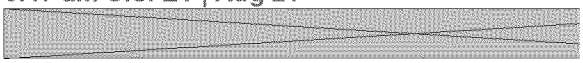
» January 22 - Automotive News Retail Forum

UPCOMING WEBINARS

» Sept. 4 - Digital Influence

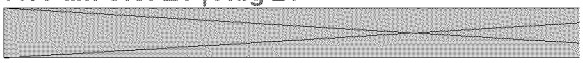
Denso fined $2.2 million in Canada for violation of competition law

6:47 am U.S. ET | Aug 21



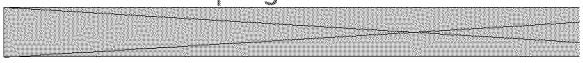
Toyota to cut prices of Lexus parts in China amid antitrust concerns

7:09 am U.S. ET | Aug 21



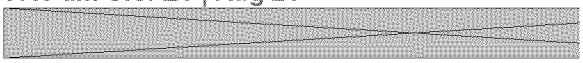
Audi awards LG Chem pact for plug-in hybrid batteries

12:01 am U.S. ET | Aug 21



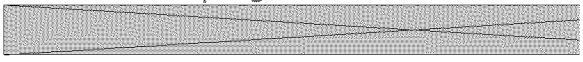
GM cuts production in Russia as market slump continues

9:49 am U.S. ET | Aug 21



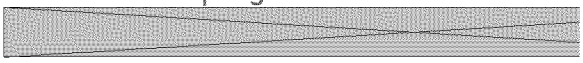
Novelis: Aluminum sales to automakers will nearly triple on new emissions, mpg rules

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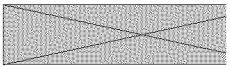


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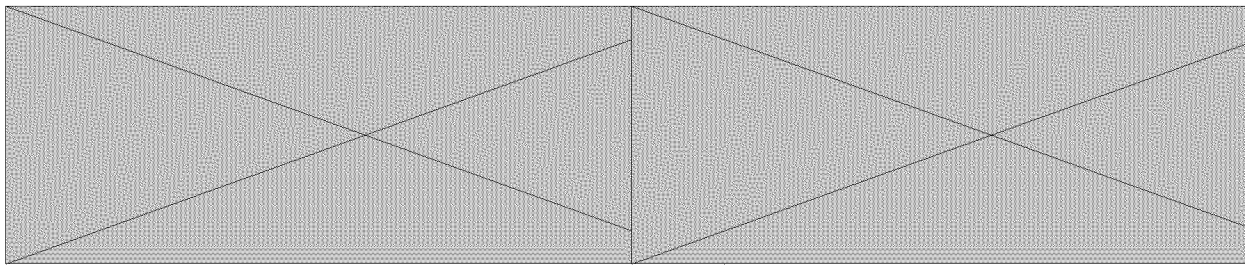
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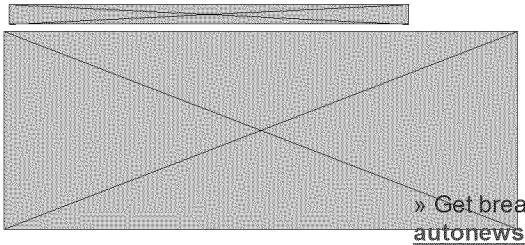
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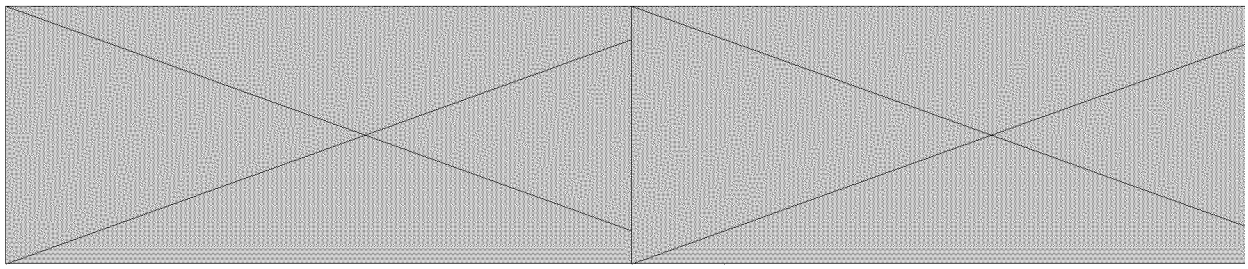
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Subject: For Review: ICCT Report - State of Clean Transportation Policy
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Dear ICCT Council Members:

The International Council on Clean Transportation (ICCT) invites you to provide comments on the final draft of our upcoming report on the *State of Clean Transport Policy*. This milestone document summarizes recent regulatory developments for clean vehicles and fuels in eleven major vehicle markets, quantifies the impacts of recently adopted policies on climate, energy, and health, and evaluates the benefits of strengthening and expanding international best practices worldwide.

The ICCT is engaging our Council Members to provide comments on the accuracy of regulatory updates, whether results in charts and tables can be displayed in a better or more compelling way, and the relevance of conclusions and recommendations to your current in-country regulatory efforts. We are also interested in your feedback on how to conduct a successful outreach process, and to identify key venues where conclusions would be especially relevant.

We will acknowledge all reviewers who provide comments on the draft report as follows: "The authors would like to thank the ICCT Council Members who have generously contributed their time and insight in reviewing and commenting on the draft version of this report. We particularly thank …". We ask you to refrain from distributing or citing this draft, since we may refine the report in response to your comments. Our tentative official release is targeted for the month of October; we will share the final report one week ahead of the public release.

The deadline to receive comments is Friday, September 5 which allows more than two weeks for review. In order to facilitate your review, we've created a summary table of key elements for each region. The quickest way to review the key elements of this report is to review the attached table, find your respective country or region, and check the underlying assumptions to ensure accuracy. If you are interested and able to comment, please respond to me and Cristiano Façanha (cristiano@theicct.org) by email at your earliest convenience.

With warm regards,

Drew

The State of Clean Transport Policy

A 2014 synthesis of vehicle and fuel policy developments

Authors: Joshua D. Miller, Cristiano Façanha

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September 2014

The International Council on Clean Transportation (ICCT) is a non-profit research organization dedicated to improving the environmental performance and efficiency of transportation to protect public health, the environment, and quality of life. The ICCT provides national and local policymakers with sound technical analysis of regulations, fiscal incentives, and other technology-based measures for clean vehicles and fuels. The ICCT works across modes including passenger cars, light commercial vehicles, heavy-duty trucks and buses, two- and three-wheelers, international aviation and marine, conducting global outreach with a focus on major and growing vehicle markets. The ICCT maintains a staff of about 40 technical and policy experts, and a network of council participants who provide input on regulatory and research priorities.

Available at: http://www.theicct.org/state-of-clean-transport-policy-2014

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Funding for this work was generously provided by the William and Flora Hewlett Foundation and the ClimateWorks Foundation. This work builds off the International Council on Clean Transportation's technical research and regulatory support on clean vehicle, ship, plane, and fuel policies around the world, as well as the TransportPolicy.net web portal. Special thanks to Nic Lutsey for providing review at multiple stages and contributing inputs regarding low-carbon fuels, electric-drive vehicles, and the conclusions of the report. The authors thank the ICCT staff who contributed to the accuracy of this report through careful review, including Anup Bandivadekar, Chris Malins, Dan Rutherford, Rachel Muncrief, Ray Minjares, Vicente Franco, Zifei Yang, Stephanie Searle, and Sebastian Galarza. Additionally, several ICCT staff contributed toward the development of the report: Alyson Azzara and Haifeng Wang (marine), Anastasia Kharina and Irene Kwan (aviation), Zhenying Shao (ongoing validation of the Roadmap model), and Sarah Chambliss (development of health impact methods). The authors also thank Drew Kodjak, Fanta Kamakaté, and Joe Schultz for their critical reviews.

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EXECUTIVE SUMMARY

The transport sector has seen unparalleled global growth in the past several decades. As emerging economies grow, transport sector growth is expected to continue for decades to come. Transport activity trends have surpassed the growth in economic activities across industrial and energy sectors in most major economies. Along with the growth, we see greatly increased petroleum use, climate impacts, and local emissions. Driven largely by transport sector growth, world oil use is expected to surpass 100 million barrels of oil per day (mbd) in the 2020-2025 timeframe.

To address the growth in oil use and the associated impacts, the transport sector has begun to take the lead in developing and implementing policies for dramatically lower emissions and increased efficiency. This inaugural *State of Clean Transport Policy* report chronicles vehicle and fuel policy developments that are increasingly mitigating greenhouse gas (GHG) emissions and lowering air pollution from the transport sector. The report includes a novel synthesis of clean vehicle and fuel regulatory development from January 2013 through July 2014. It focuses on eleven of the top vehicle markets that accounted for 85% of global vehicle sales in 2013. The report includes up-to-date analyses of the relative contribution of clean vehicle and fuel policies to deliver reductions in air and climate pollutants, energy use, and benefits to public health.

This report covers national-level efficiency and exhaust emission standards for light - and heavy-duty vehicles, fuel sulfur standards, policies for low carbon fuels, and international regulations for marine vessels and aircraft. In addition, the work highlights areas where progress is lagging in the implementation of best-practice policies for clean transport. This report is not meant to provide a complete synthesis of all transport policy. Not included in this report are medium and smaller vehicle markets, locomotives, motorcycles, or off-road vehicles, even though we acknowledge their substantial contribution in certain markets. In addition, other policies that aim at reducing transport activity and shifting people and goods to more environmentally-friendly modes are beyond the scope of this work, but their critical role is critical to meet global climate targets.

Key high-level conclusions – and associated recommendations – about the state of clean transport policies and their impacts on climate, energy use, air pollution, and public health are summarized below.

Conclusion 1: There have been a considerable number of major regulatory developments in clean transport in 2013/2014.

From January 2013 through July 2014, major new policies were adopted or being newly implemented in the top vehicle markets. Brazil, India, and Mexico adopted their first regulations to improve the efficiency of new light-duty vehicles (LDVs), while the European Union (EU) approved and China proposed more stringent standards. The United States (US), Canada, and China also implemented their first heavy-duty vehicle (HDV) efficiency standards. Many regions implemented more stringent vehicle standards for local air pollutants, including China, the EU,

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Brazil, Russia, and South Korea. The US adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide. There has also been progress toward lower sulfur fuels in China, the US, and Brazil that lays the foundation for stronger vehicle emissions regulations. In addition, the EU, US, and California have proposed several revisions to strengthen their low-carbon fuel policies. At the international level, two policies entered into force in 2013 that will improve the efficiency of marine vessels: the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP).

Climate impacts and energy use

Conclusion 2: Efficiency standards now cover three out of four light-duty vehicles sold.

In a span of just ten years through 2014, the share of global LDV sales regulated for fuel efficiency or carbon dioxide (CO_2) emissions increased from roughly 30% to over 75%. These regulatory standards are projected to reduce business-as-usual (BAU) energy consumption by 7.4 million barrels of oil per day(mbd) in 2030, equivalent to 1.5 gigatons of carbon dioxide ($GtCO_2$). However, standards adopted thus far are insufficient to offset the projected increase in vehicle activity and associated emissions.

> **Recommendation: Extend and expand light-duty vehicle efficiency standards.** The ICCT is part of the Global Fuel Economy Initiative (GFEI), a coalition that seeks to cut the fuel consumption of new light-duty vehicles in half by 2030. Considering projected growth in vehicle sales by region, the adopted standards to date are expected to reduce new vehicle fuel consumption 30% by 2030, resulting in a global average sales-weighted reduction of 22%. If GFEI's target of a 50% reduction is to be met, these standards will need to be substantially strengthened in markets with current standards and expanded to the remaining unregulated markets. Similar to the US, regions such as the EU, China, Japan would need to extend efficiency requirements through at least 2025 to increase technology investments, allow for greater lead -time, and reach the GFEI target. Such an extension and expansion of LDV efficiency standards could cut emissions by 0.95 $GtCO_2$ and 4.9 mbd in 2030.

> **Recommendation: Further catalyze the early electric-drive vehicle market.** Electric-drive vehicles have clear advantages over conventional engines due to their higher efficiency and ability to draw from low-carbon energy sources. Numerous regions have already utilized regulations, tax exemptions, public infrastructure deployment, and other non-fiscal incentives to encourage greater investment, sales, and use of electric-drive vehicles. However, electric vehicles still account for a small share of overall passenger car sales, representing less than 1% in most major auto markets. Stronger and more widespread measures are needed to achieve economies of scale, accelerate the market adoption of electric vehicles, and capture the associated benefits.

Conclusion 3: Progress in the adoption of HDV efficiency standards has been slow.

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There has been limited progress in the development of HDV efficiency standards globally, despite the fact that HDVs represent more than 40% of on-road fuel consumption in most vehicle markets. To date, efficiency standards for HDVs have been adopted in China, the US, Japan, and Canada. In many cases, data limitations, the diversity of vehicle types (e.g., long-distance heavy-duty trucks, interurban buses, garbage trucks), and insufficient industry engagement prevent more immediate progress in HDV efficiency standards in many regions. Because of increased demand for freight truck and bus transit activity, HDV emissions will continue to grow substantially, with current projections indicating a nearly 60% increase by 2030 from 2010 levels.

> **Recommendation: Expand adoption of HDV efficiency standards.**
> The expanded adoption of HDV efficiency standards could have a substantial impact on the reduction of energy consumption and GHG emissions, stabilizing HDV emissions after 2025, and saving 0.59 $GtCO_2$ and over 2.8 mbd in 2030. In particular, mandated regulatory CO_2 reductions from HDVs in the EU could also be a critical step toward similar policies in markets around the world with similar HDV fleets that are following EU emission standards. Voluntary "green freight" programs offer an important opportunity for early action and data collection for entire fleets while regulations for new HDV fuel efficiency are being considered.

Conclusion 4: Despite efficiency regulations for new marine vessels, the marine and especially the aviation sector have dramatic GHG mitigation potential

A large share of ship and aircraft emissions and fuel use are for journeys between countries, and thus their impacts remain widely unacknowledged, and mitigation actions are perpetually de-prioritized. For the marine sector, new vessel efficiency standards have entered into force, and will reduce GHG emissions by 0.34 $GtCO_2$ in 2030 compared to a BAU scenario. However, a comprehensive policy requiring mandatory reductions in in-use fuel consumption remains under development. There are currently no proposed or adopted policies for a global CO_2 standard for new aircraft or a global market-based measure to constrain and offset emissions from the in-service fleet.

> **Recommendation: Strengthen efficiency regulations for the marine sector and adopt regulations for aviation.**
> The potential to mitigate the in-use marine fleet's CO_2 emissions is among the most substantial of all policies discussed in this report. Such policies, alongside strengthened standards for new vessels, could save 0.25 $GtCO_2$ and over 1.3 mbd in 2030. Similarly, efforts by ICAO to develop both a CO_2 standard for new aircraft and a global MBM framework for the in-service fleet by 2016 could be among the most significant actions to reduce CO_2 emissions and fuel consumption from transport in the long run.

Conclusion 5: Leading low-carbon fuel policies are still in development

Many countries have now established targets for increased biofuel deployment for future years. The EU, US, and California policies have gone further, moving toward greater rigor, analysis of more fuel pathways, and lifecycle greenhouse gas accounting to better differentiate the

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sustainable fuels that are reliably low carbon. These three leading jurisdictions are still actively developing their policies, with key challenges related to how precisely they credit and promote various biofuel, fossil fuel, and electric-drive fuel sources. The EU and California regulatory standards would reduce average fuel carbon intensity by approximately 6% in the 2020 timeframe.

> **Recommendation: Promote low-carbon, deter high-carbon fuels**
> To establish more robust longer-term fuel carbon policy, countries should shift from generic biofuel targets to policies that promote fuels with reliably low lifecycle carbon, low indirect land use change, and minimal food system interaction. Recent EU-based findings indicate that up to 16% of road transport fuel could be derived from waste-based sources by 2030. In addition, fuel policy that disincentivizes the use of high-carbon fossil fuels (e.g., oil sands, high-upstream leakage natural gas) is lacking, with the possible exception of California. Over the long-term, developing these fuel policies to especially promote de-carbonized electricity (and hydrogen) for the growing number of electric-drive vehicles, will be a key climate stabilization goal for transport .

Conclusion 6: The transport sector has shown much progress in adopting climate mitigation policies to date, and further cost-effective low-carbon technologies remain.

Vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Actions toward international marine vessel efficiency have also proven the potential effectiveness of international fora when they have a sectoral focus and a strong business case. Yet many cost-effective opportunities remain to reduce transport sector CO_2 emissions and accrue fuel savings that greatly offset technology costs and "pay back" to consumers well within the lifetimes of the technology.

Penetration of cost-effective vehicle, marine, and aviation efficiency technologies and low-carbon fuels into all major vehicle markets could have dramatic effects on global CO_2 emissions and petroleum use from transport. Figure ES-1 summarizes the full effects of adopted and potential vehicle and fuel regulations on global CO_2 emissions from the transport sector. Regulations adopted to date will reduce lifecycle CO_2 emissions by 2.2 $GtCO_2$ from BAU levels in 2030, equivalent to approximately 11 mbd in reduced oil consumption . Additional reductions from the expansion of best-practice policies can deliver even greater benefits. Moving beyond currently adopted efficiency standards to also promote ultralow carbon transport alternatives like electric-drive can essentially stabilize global CO_2 emissions after 2020, even with continued growth in passenger and freight transport activity.

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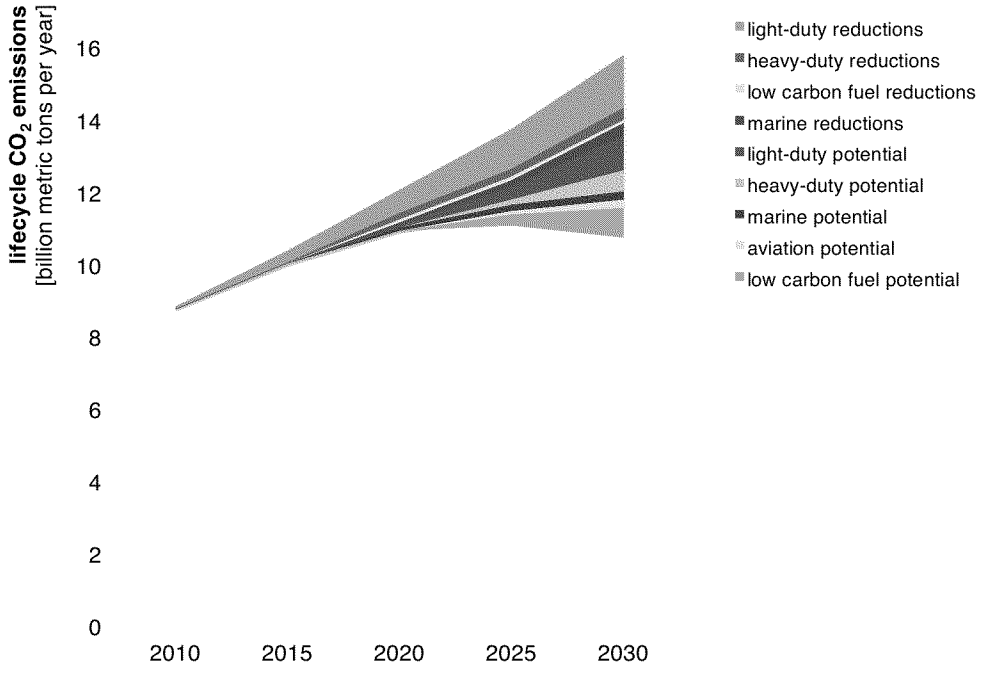


Figure ES-1. Global CO_2 emissions from transport, 2010–2030

The adopted policy actions and the potential for additional transport-sector policies to mitigate GHG emissions are substantial. However, global policies that have been adopted to date are not nearly sufficient to constrain temperature increases to two degrees Celsius and avoid catastrophic climate change. Future research should include a comparison of the impacts of adopted and potential climate mitigation actions across the economic sectors (e.g., transport, electric power, industrial, forestry) toward achieving global climate targets. Vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Yet many cost-effective opportunities remain to reduce transport sector CO_2 emissions and accrue fuel savings that offset technology costs. Such opportunities exist to extend existing policies (e.g., through 2025), adopt similar policies in emerging vehicle markets, expand progress to other transport modes (e.g., HDVs, marine, aviation, off-road), and shift to alternative low-carbon fuels.

Air pollutant emissions and public health

Conclusion 7: Two out of three new vehicles lack world-class emission controls.

World-class vehicle standards require state-of-the-art emission control technologies for local pollutants with strong adverse health impacts such as particulate matter (PM) and oxides of nitrogen (NO_x). A prominent benchmark is to achieve Euro 6/VI emission levels, at which exhaust emissions of PM and NO_x are reduced by over 97% from unregulated levels. Such standards have been adopted and implemented in the US, Japan, Canada, the EU, and South

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Korea. Other vehicle markets have not yet proposed or adopted equivalent standards, and many medium-sized vehicle markets in Asia-Pacific, Middle East, Latin America, and Africaare generally several steps behind these world-class standards. The share of light- and heavy-duty vehicle sales subject to Euro 6/VI-equivalent standards has been increasing, from roughly one in four globally in 2010 to an estimated one in three in 2015. However, much of the growth in vehicle sales is occurring in countries that ha ve yet to adopt such standards. While vehicle sales grew by over 10% in India and Brazil, and by over 18% in China between 2005 and 2013, compared to decreasing vehicle sales in most markets with world-class standards in the same time period. While several of the largest vehicle markets requirestate-of-the-art emission controls and others are considering harmonizing with existing standards, growth in urban transport activity will present an increasing public health risk unless emissions and fuel sulfur standards are brought up to date worldwide.

> **Recommendation: Expand world-class vehicle and fuel standards to emerging and developing economies.**
> Most emerging and developing regions are experiencing rapid motorization and have not yet adopted standards that require ultralow-sulfur fuel or state-of-the-art PM and NOx emission control technology. As a result, these countries would strongly benefit from the adoption of world-class vehicle and fuel standards in terms of air quality improvements and public health benefits (see Conclusion 9).

Conclusion 8: Despite progress with current emission standards for international marine and aviation, future policy and timelines remain uncertain.

The IMO is responsible for setting emission standards for international vessels, and has to date regulated emissions of NO_x and sulfur content of bunker fuels with more stringent limits applied to Emission Control Areas (ECAs). The regulation of black carbon to reduce adverse impacts on climate and human health is pending technical discussions regarding black carbon definition and measurement methods.

For international aviation, ICAO has developed multiple tiers of global aircraft NO_x emission standards, which are based on the landing take-off (LTO) cycle and are targeted towards air quality improvements around airports. These global standards are then translated into national requirements under domestic legislature and implemented by national transportation or environmental authorities.

> **Recommendation: Strengthen existing standards and develop new standards for PM emissions for international marine and aviation.**
> For international marine, proven technologies and fuels can reduce emissions of PM, sulfur oxides (SO_x), and NO_x by over 90% from uncontrolled levels. More-stringent standards to drive the adoption of these technologies and fuels could reduce international marine emissions of NO_x by 24%, and PM and SO_x emissions by roughly 80% in 2030 from BAU levels.

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For aviation, in 2010 ICAO established more aggressive but non-binding NO_x reduction targets equivalent to a 45% reduction from the latest standard by 2016 and a 60% reduction by 2026. Making these non-binding targets mandatory would ensure that the intended benefits would be realized . Ideally, the ICAO would adopt its non-volatile particulate matter (nvPM) standard, aimed at reducing the impacts of ultrafine PM on air quality, human health, and global climate, by 2016, in line with ICAO's expectations.

Conclusion 9: Expanded adoption of standards requiring best-practice vehicle emission controls and ultralow-sulfur fuel could avoid three out of four premature deaths from exposure to air pollution emitted by vehicles in 2030.

Figure ES-2 illustrates the effects of two vehicle technology pathways on the number of global premature deaths caused by exposure to vehicle emissions in the year 2030. These estimates are strictly limited to exhaust emissions of $PM_{2.5}$ from light- and heavy-duty on-road vehicles in urban areas and thus represent a conservative estimate of health impacts from transport. Without additional action beyondthe currently adopted regulations, the number of premature deaths from direct exposure to on-road vehicle emissions could grow by two-thirds in just 16 years. The vast majority of these impacts would occur in India, China, Brazil, Mexico, and the countries in the Asia-Pacific, Latin America, Middle East, and Africa. As shown in the figure, implementing world-class emission standards would reduce global transport-related air pollution mortality in 2030 from approximately 270,000 deaths to 71,000 deaths in 2030, with benefits that are greatly concentrated in major cities.

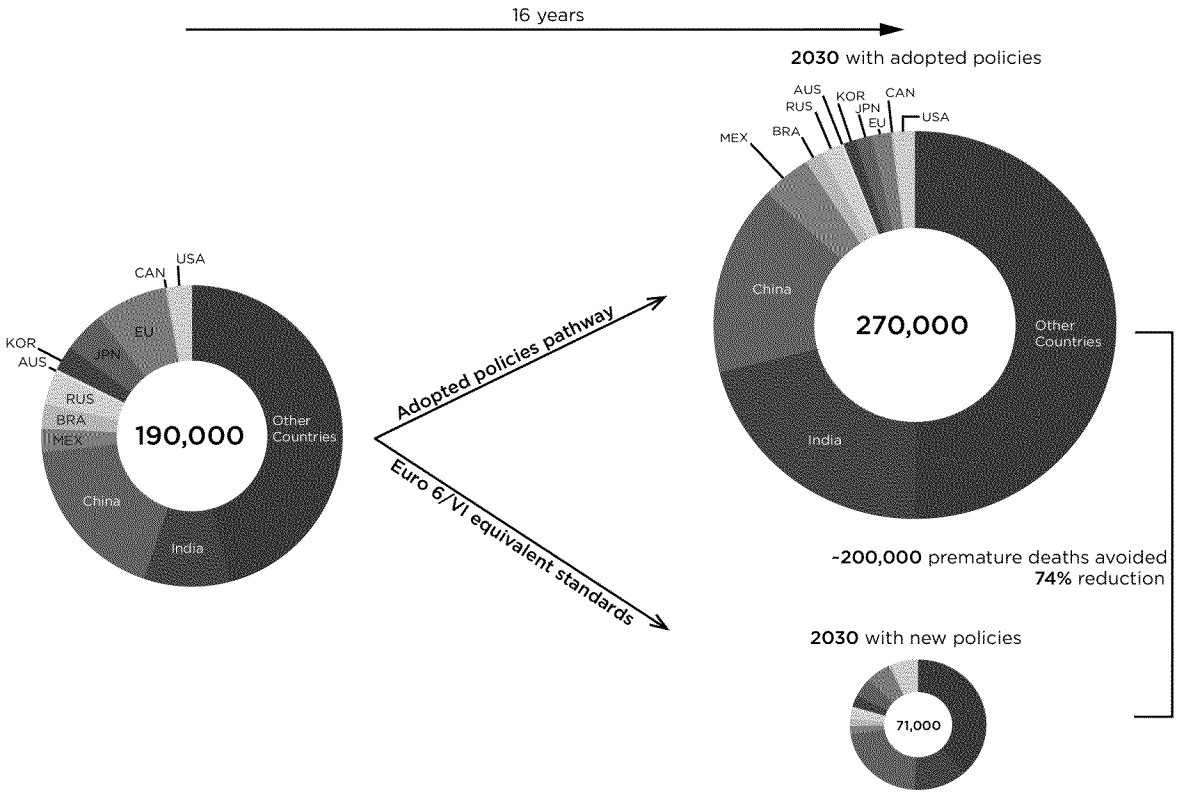
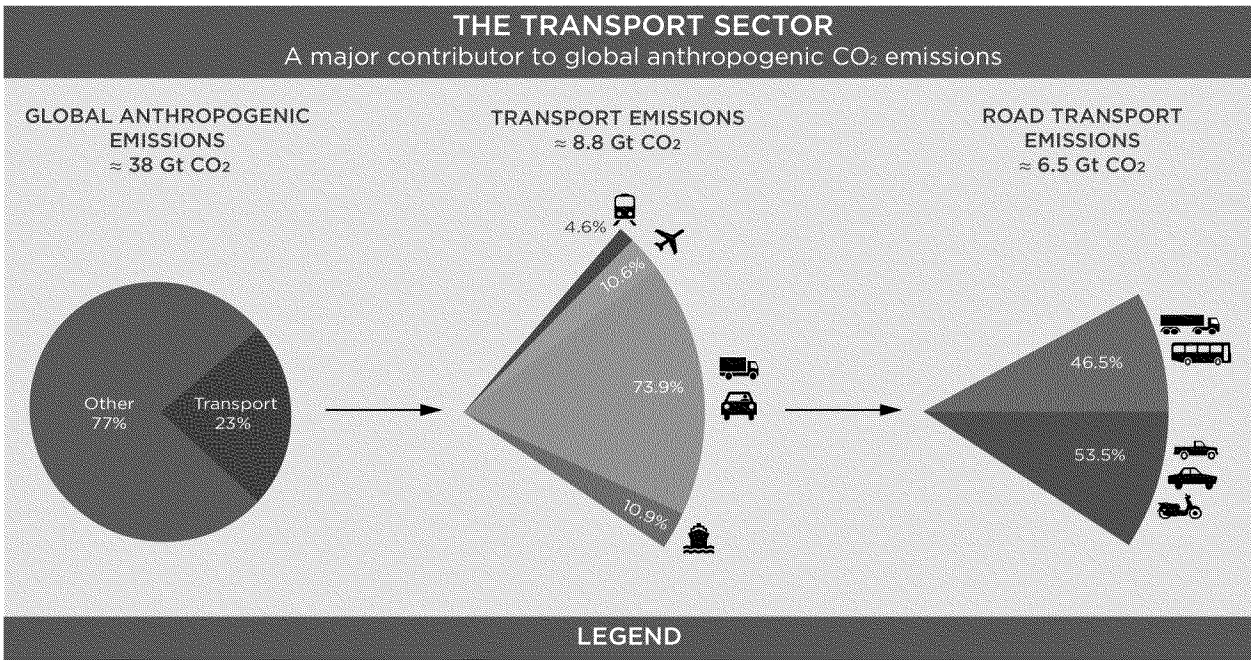


Figure ES-2. Global premature deaths from light- and heavy-duty vehicle exhaust $PM_{2.5}$

CHAPTER 1. INTRODUCTION

The transport sector has seen unparalleled global growth in the past two decades, in the form of increased vehicle ownership, passenger and freight activity, and energy use across all transport modes. Transport sector growth has greatly surpassed industrial and energy sector growth in most large economies. Despite the evident economic benefits from increased mobility and freight trade, such activity has negative consequences such as increased petroleum use and associated climate and health impacts. Driven largely by transport sector growth, world oil use, including its unconventional oil and other fossil replacements , is expected to surpass 100 million barrels of oil per day (mbd) in the 2020 -2025 timeframe (IEA, 2013). To help mitigate the associated environmental effects, many governments have begun to developtransport sector policies improve the environmental and energy performance of vehicles and fuels.

In 2010, the global transport sector was responsible for almost a quarter of all anthropogenic CO_2 emissions, resulting in the release of 8.8 $GtCO_2$ into the atmosphere and consuming 46 mbd (Figure 1). Within the transport sector, on-road vehicles accounted for about three quarters of fuel consumption (35 mbd) and CO_2 emissions (6.5 $GtCO_2$). (See Box 1).



Notes:
Global anthropogenic CO_2 emissions in 2010 based on IPCC (2014).
Transport CO_2 emissions in 2010 estimated by ICCT (2014) include the full fuel lifecycle, including direct emissions from combustion & upstream emissions from extraction, refining, & distribution of fuels.
Sources:
ICCT (2014). Global Transportation Roadmap Model. Available from http://www.theicct.org/global-transportation-roadmap-model
IPCC (2014). Summary for Policymakers. Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Figure 1. Global transport sector lifecycle CO_2 emissions, 2010

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Box 1. Fuel consumption and carbon dioxide metrics

While the vast majority of transport fuel is derived from fossil fuels, a small but growing share consists of biofuels, electricity and hydrogen derived from renewable energy sources. Throughout this report, estimates of fuel consumption are given in **million barrels of oil equivalent per day**, abbreviated as **mbd**.

Many sources estimate direct CO_2 emissions from fuel combustion, also known as "tank-to-wheel" emissions; however, it is also important to consider the upstream, or "well-to-tank" emissions that are generated from the extraction, refining, and distribution of transport fuels. The estimates in this report consider the full fuel lifecycle, or "well-to-wheel" and include both combustion and upstream emissions; these are given in **million** or **billion metric tons per year**, abbreviated as **$MtCO_2$** and **$GtCO_2$**, respectively. These estimates do not include emissions from the manufacture or scrappage of vehicles, ships, or planes, or emissions associated with transport infrastructure.

Motorized transport is a major contributor to outdoor air pollution, particularly near major roadways and in urban areas with a high concentration of vehicle activity. Exposure to outdoor air pollution resulted in 3.2 million early deaths worldwide and ranks among the top ten health risks (Lim et al. 2012). Figure 2 compares the annual average $PM_{2.5}$ concentration in 2010 of cities worldwide with over 100,000 inhabitants against the levels recommended by the World Health Organization (WHO). Most cities worldwide have serious air quality problems, in particular those in the Asia-Pacific region. Particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$) is among the most harmful vehicle pollutants with a range of associated health impacts including cardi ovascular and respiratory diseases, lung cancer, and infant mortality. In response to the serious health impacts from vehicle emissions, state-of-the-art emission control technologies have been developed which are capable of reducing emissions of particulate matter (PM) and oxides of nitrogen (NO_x) by over 97% from unregulated levels (Johnson, 2012). Advancing to world-class vehicle emission standards (with stringency equivalent to Euro 6/VI or better) paired with requirements for ultralow-sulfur fuel can dramatically reduce emissions of local air pollutants and associated health impacts, even amid growth in vehicle activity.

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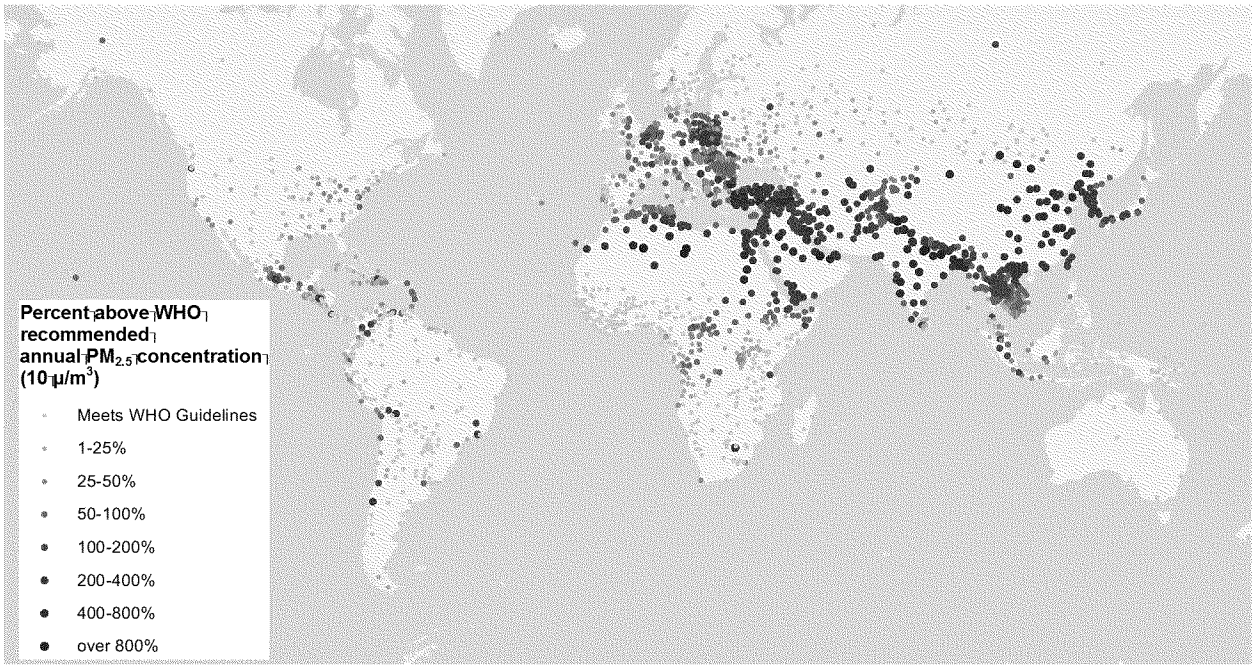


Figure 2. Annual Average $PM_{2.5}$ Concentrations Relative to WHO Guidelines (Adapted from Brauer et al., 2012 and WHO, 2014)

Includes monitoring data from WHO (2014) and modeled concentrations f rom Brauer et al. (2012) for 2010 where monitoring data was not available.

This report covers 11 of the top vehicle markets that represented 85% of total vehicle sales in 2013 (Figure 3). These markets include China, US, EU, Japan, Brazil, India, Russia, Canada, South Korea, Australia, and Mexico. These regions are collectively referred to as "selected markets" in this report. While this edition focuses on 11 selected vehicle markets, future editions may expand the scope to include regulatory developments in growing vehicle markets such as Thailand, Indonesia, Argentina, Turkey, Saudi Arabia, Iran, Malaysia, and South Africa – each of which had over half a million new vehicle sales in 2013.

The scope of this report is limited to on-road vehicles, marine, and aviation, and excludes motorcycles, locomotives, and off-road vehicles. Future editions may expand the scope to include motorcycle and rail policies. The scope of policies covered includes national-level vehicle efficiency and GHG standards, tailpipe emission standards for local air pollutants, and low-sulfur fuel standards, as well as international regulations for marine vessels and aircraft. Policies that aim to reduce transport activity and shift people and goods to more environmentally-friendly modes are beyond the scope of this work, but we recognize their critical role in meeting global climate targets as described in a previous analysis (Façanha et. al, 2012).

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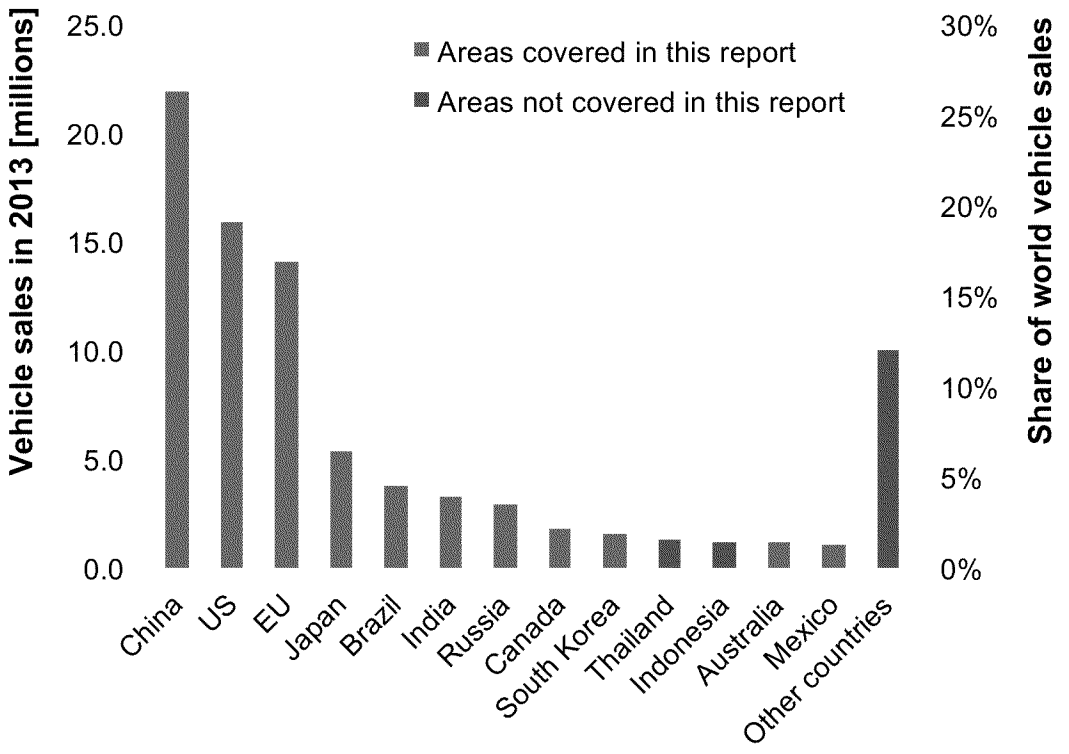


Figure 3. Sales of light- and heavy-duty vehicles by region in 2013 (Based on OICA, 2014)

Clean vehicle and fuel policies are an essential part of local, national, and international efforts to reduce energy consumption, mitigate climate change, and ensure adequate air quality. Such findings are demonstrated in wide ranging studies by the IPCC, IEA, and UNEP, among many others (An et al., 2011; GFEI, 2014; IEA, 2012; IPCC, 2014; Shindell et al., 2011; UNEP, 2011). Two previous ICCT studies have contributed to recent international modeling work and policy studies by assessing the direct effects of adopted national-level clean vehicle and fuel policies on emissions of GHGs and local air pollutants, and evaluating the benefits of actionable timelines for new policies to reduce energy consumption and mitigate impacts of vehicle emissions on climate, air quality, and health (Façanha et al., 2012; Chambliss et al., 2013).

This report builds upon previous work to create a novel synthesis of information and analysis on clean transport policy, bringing together the following elements: (1) Summarize the state of clean vehicle and fuel policies; (2) Provide an update of recent regulatory developments in major markets; (3) Quantify the impacts of recently adopted policies on climate, energy, and health; (4) Evaluate the benefits of strengthening and expanding international best practices . The report aims to accomplish these elements by synthesizing technical and regulatory work in the top vehicle markets worldwide. This work relies heavily on TransportPolicy.net, a collaborative effort between the ICCT and DieselNet that provides accurate, up-to-date, referenceable, and comprehensive information regarding regulatory policies for clean vehicles and fuels (ICCT & DieselNet, 2014). (See Box 2). This study also relies on ICCT's validated methods for emissions quantification, including our publicly-available Roadmap model that

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evaluates the impacts of transport policies on energy, GHGs, emissions of local air pollutants, and health (See Façanha et al., 2012; Chambliss et al., 2013; ICCT, 2014).

Box 2. Hyperlink references to TranportPolicy.net

In addition to the standard referencing to technical and government reports, this report contains hyperlinks to pages on the TransportPolicy.net website. This site is maintained by the ICCT as a public repository and reference site for technical and implementation details of fuel quality, vehicle, marine, and aviation policies described herein.

This first edition of the *State of Clean Transport Policy* seeks to summarize, track, and quantify the impacts of such vehicle and fuel standards – with an aim to provide annual updates as transport policies and systems evolve. The remainder of the document is organized as follows. Chapter 2 provides an update of regulatory policies for clean vehicles and fuels that were proposed, adopted, or first implemented from January 2013 through July 2014. Chapter 3 evaluates the effects of clean transport policies adopted to date on energy consumption, transport emissions, and health impacts, and quantifies the benefits of strengthening and expanding the adoption of international best practices. Finally, chapter 4 summarizes the key conclusions and recommendations for future policy action based on recent progress and current policy developments.

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CHAPTER 2. NEW NATIONAL AND INTERNATIONAL REGULATIONS 2013-2014

This chapter provides an update of regulatory policies for clean vehicles and fuels that were proposed, adopted, or first implemented from January 2013 through July 2014. Each of the following sections contains a table that summarizes recent regulatory developments, provides a measure of each regulation's stringency, estimates the reduction in annual CO_2 emissions in 2030 (for efficiency policies), and hyperlinks to more information. Technical information is linked to TransportPolicy.net, a site maintained by the ICCT and DieselNet which provides comprehensive, up-to-date, and sourced information on energy and environmental regulations in the transport sector worldwide, with a focus on vehicles and fuels. Policy updates are linked to the ICCT's website (theicct.org), which provides additional publications regarding international best practices and technical analyses of the costs, benefits, energy and environmental impacts of the regulations. Key terms related to the status of regulations are summarized in Box 3.

Box 3. Key terms related to regulatory status

While the processes that regulations undergo from consideration to implementation vary by region and policy type, the terms used in this report are defined as follows unless otherwise indicated:
Proposal – refers to a published regulatory proposal that has not yet been adopted
Adoption – indicates that a regulation has been finalized, with established dates for phase-in and implementation for the regulatory requirements
Entry into force – refers to the date at which an international regulation becomes legally binding upon Governments that have ratified it; in the EU, this corresponds to implementation
Delay – indicates when a regulation has been formally adopted, but one or more implementation dates have been set back
Implementation begun – indicates when new vehicle type approvals are first subject to a new regulation; for fuel sulfur standards, corresponds to availability of fuel meeting requirements
Current implementation – indicates all vehicle sales and registrations of new vehicles are subject to the regulation

2.1. Efficiency of light- and heavy-duty vehicles

Through July 2014, all selected markets except Australia and Russia have adopted fuel efficiency and GHG regulations or equivalent fiscal measures for light-duty vehicles (LDVs). In contrast, only China, the US, Canada, and Japan have adopted similar regulations for heavy-duty trucks and buses (Table 1). The latest phase of LDV standards will reduce CO_2 emission rates of new vehicles (in grams per vehicle-km) between 9% and 35%, compared to 11% to 14% for the first phase of HDV standards.

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Table 1. Adopted regulations for light- and heavy-duty efficiency in selected regions

	Light-duty vehicles			Heavy-duty vehicles		
Region [a]	Baseline Model Year [b]	Implementation Period (Model Year)	Reduction in average CO_2 rate (grams/vehicle-km)	Baseline Model Year	Implementation Period (Model Year)	Reduction in average CO_2 rate (grams/vehicle-km)
Australia	–	–	–	–	–	–
Brazil	2013	2013-2017	12% [c]	–	–	–
Canada	2011	2011-2016	20%	2011	2014-2018	14%
China	2011	2012-2015	9%	2012	2014-2015	11%
EU	2015	2020-2021	27%	–	–	–
India	2012	2016-2021	17%	–	–	–
Japan	2015	2020	16%	2006	2015	12%
South Korea	2011	2012-2015	9%	–	–	–
Mexico	2012	2014-2016	13%	–	–	–
Russia	–	–	–	–	–	–
US	2017	2017-2025	35%	2011	2014-2018	14%

Shaded cells = Adopted or newly implemented between Jan. 2013 and Jul. 2014 " – " = No standard

[a] *Includes eleven of the top vehicle markets (Australia, Brazil, Canada, China, EU, India, Japan, Korea, Mexico, Russia, and the US)*

[b] *Percent reduction in new fleet fuel consumption estimated from a baseline year (not necessarily first model year of implementation) to the final model year covered by the regulation. Reductions for HDVs are sales -weighted by vehicle type. Source: TransportPolicy.net*

[b] *Brazil's Inovar-Auto program requires a 12.1% improvement for manufacturers to qualify for a 30% reduction in vehicle sales tax.*

The following tables summarize recent developments in regulations to reduce the fuel consumption and GHG emissions of LDVs and HDVs. Since the beginning of 2013, five of the selected markets – China, the EU, Brazil, India, and Mexico – have formally proposed, adopted or newly implemented regulations or equivalent fiscal measures to improve LDV efficiency (Table 2). This progress occurred after the adoption in 2012 of new LDV efficiency standards in the US, which extend the benefits of improved vehicle efficiency from 2017 to 2025. LDV regulation stringency is summarized by the new fleet target in grams CO_2 per vehicle-km, which ranges from 95 to 169 gCO_2/km, demonstrating significant potential for further benefits by reducing the disparities among countries with LDV efficiency standards in place. As shown in Table 2, these regulatory developments are expected to avoid an estimated 420 $MtCO_2$ in 2030.

Table 2. Regulatory developments in light-duty vehicle efficiency in 2013-2014

Regulatory development	New fleet target (grams CO_2 per km) [a]	CO_2 reduced in 2030 (Mt per year) [b]	More information
Brazil implemented Inovar -Auto in 2013, a fiscal instrument that incentivizes makers of passenger vehicles and light commercial vehicles to improve new fleet efficiency by 12-19% between 2013 and	– [c]	**19**	Technical Policy update (Façanha, 2012)

2017.			
China released rules for calculating corporate average fuel consumption of passenger cars to support enforcement of Phase 3 efficiency standards, which target a fleet average fuel consumption of 6.9L/100km in 2015.	2015: **161**	–	Technical Policy update (He & Yang, 2014a)
China renewed and enhanced subsidies for energy-efficient passenger vehicles, tightening fuel consumption requirements by 2-14% and offering market incentives for early compliance with China 5 emission standards on vehicles with engines less than 1.6L.	–	–	Policy update (He, 2013)
EU adopted 95 gCO_2/km standards for passenger cars with full compliance in 2021, and 147 gCO_2/km standards for light co mmercial vehicles with compliance in 2020.	2020: **95 / 147**	**140**	Technical Policy update (Mock, 2014)
India adopted the country's first passenger vehicle efficiency standards, which take effect in 2016 and set a target of 113 gCO_2/km by 2021.	2021: **113**	**50**	Technical
Mexico adopted CO_2 standards for cars, pickups, and SUVs from model years 2014-16, setting a fleet average target of 14.6 km/L in 2016.	2016: **169**	**17**	Technical Policy update (Blumberg, 2013)
China released a proposal for Phase 4 fuel consumption standards that set a target of 5L/100km by 2020.	2020: **117**	**190**	Technical Policy update (He & Yang, 2014b)
TOTAL		**420 $MtCO_2$**	

Implemented Adopted Proposed Delayed implementation

[a] *All values adjusted to NEDC test cycle. Source: He & Yang (2014c).*
[b] *Estimates are rounded to two significant digits.Source: ICCT (2014).*
[c] *"–" indicates not applicable or no estimate is available.*

Compared to regulations for LDV efficiency, HDVs have a relatively short regulatory history, with 2014-2015 a landmark period of implementation for all four mandatory HDV efficiency standards. The lead times between adoption and implementation of HDV efficiency standards are progressively shortening: Japan's Phase 1 standard was adopted in 2005, and financial incentives for early compliance came into effect several years before full implementation, which is scheduled for 2015. Such regulations were subsequently adopted in the US (2011) and Canada (2013) and applied to model year 2014 vehicles. In contrast, China's Phase 2 standard was finalized in February 2014 and applied to new type approvals only a few months later,

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starting in July 2014. Other regions, however, have yet to adopt such standards. For example, Europe has adopted standards for light commercial vehicles[1] (LCVs) through 2020 but has not adopted standards for heavier vehicles, which account for a much larger share of energy consumption. In Table 3, the associated stringency of HDV standards is estimated according to the expected reduction in new vehicle fleet fuel consumption over the timeframe of the regulation, weighted by the activity of each vehicle type (e.g., vocational, straight truck, and tractor-trailers). As shown in the table, these regulations will avoid an estimated 210 $MtCO_2$ in 2030.

Table 3. Regulatory developments in heavy -duty vehicle efficiency in 2013-2014

Regulatory development	Percent reduction in new fleet fuel consumption [a]	CO_2 reduced in 2030 (Mt per year) [b]	More information
Canada's Phase 1 standards were adopted in March 2013 and applied starting with model year 2014 vehicles. These standards, which are closely aligned with the US rules, require CO_2 emission reductions of 6-23% and will be fully phased in by 2018.	**14%**	**12**	Technical Policy update (Sharpe, 2013)
Japan's financial incentives for early compliance with the Phase 1 standard are in effect; the standard becomes fully enforceable in 2015. [c]	**12%**	**12**	Technical
US Phase 1 standards came into effect starting with model year 2014 vehicles. The standards require CO_2 emission reductions of 6-23% and will be fully phased in by 2018.	**14%**	**76** [d]	Technical Policy update (Sharpe, 2011)
China adopted Phase 2 fuel consumption standards in February 2014. The standard applied to new type approvals only a few months later, in July 2014; the standard is expected to reduce new fleet average fuel consumption 11% by July 2015.	**11%**	**110**	Technical Policy update (He & Tu, 2014)
TOTAL		**210 $MtCO_2$**	

Implemented Adopted Proposed Delayed implementation

[a] *Vehicle activity-weighted reduction in new fleet fuel consumption over the timeframe of the regulation.*
[b] *Estimates are rounded to two significant digits.Source: Façanha et al. (2012).*
[c] *MLIT (2012).*
[d] *CO_2-equivalent estimate. Source: EPA (2011).*

[1] Light commercial vehicles include light trucks and vans. Such vehicles weighing less than 2500kg gross vehicle weight rating (GVWR) are considered light-duty vehicles. In North America, the definition extends to vehicles weighing up to 3863kg.

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2.2. Air pollutant emissions of light- and heavy-duty vehicles

Light-duty vehicles (LDVs) are significant contributors to urban air quality issues, especially for pollutants that form in the atmosphere such as ozone and secondary PM. In countries that allow diesel LDVs to be sold, the light-duty fleet can also be a major source of direct PM emissions. While the most stringent emission standards currently in effect are US Tier 2 and Japan's New Post Long-Term Standards, Euro 6 will come into effect in September 2014 in the EU. The US EPA's Tier 3 standards require significant improvements from the emission standards currently in force and could push the next generation of LDV emission controls. While heavy-duty vehicles (HDVs) in most countries constitute only a small share of the total vehicle fleet, they contribute more than two-thirds of exhaust PM and NO_x emissions from on-road vehicles. The most stringent emission standards for HDVs that have already been adopted are US 2010, Japan's New Post Long-Term Standards, and Euro VI. These stringent emission standards for LDVs and HDVs, which are referred to as Euro 6/VI-equivalent standards, require ultra low-sulfur fuel, with 15 parts per million (ppm) or less.

Box 4. Regulations for vehicle pollution and fuel sulfur content

The regulatory approaches for vehicle emissions and fuel quality developed in the US and Europe provide a pathway that other countries can follow to improve the environmental performance of their vehicle fleets. Regulations for LDVs in Europe progress from Euro 1 to Euro 6 using Arabic numerals, and in the US include Tier 1, Tier 2, and Tier 3 – the most recent of which sets the most stringent emission limits of any LDV regulation in the world. HDV regulations in Europe progress from Euro I to Euro VI using Roman numerals, and in the US include EPA 2004, 2007, and 2010 standards. Regulations for LDVs require new vehicles to meet emission limits based on distance traveled, while those for HDVs tend to limit new vehicle emissions based on engine work done. Both such standards tend to apply first to all new type approvals, followed by application to all new sales and registrations up to a year or so later. The timelines in this report refer to standards by the date of application to all new sales and registrations. The impact of these standards on fleetwide emissions depends on the rate of fleet turnover, which averages significantly longer for HDVs than for LDVs.

In the US, EU and Japan, vehicle emissions regulations have accelerated the commercialization of advanced emission control technologies. Because many of these technologies require cleaner fuels to function optimally, vehicle regulations have been paired with fuel quality regulations that allow the proper function of emission controls as well as reduce emissions from the legacy fleet. Such regulations have proven to be a highly cost-effective means of controlling vehicle emissions, with the most recent Tier 3 LDV regulations in the US yielding 4.5 to 13 dollars of benefits for every dollar spent on cleaner vehicles and fuel (EPA, 2014). Today, the technologies for clean vehicles and fuels necessary to meet the latest regulations in the US, Europe, and Japan are commercially available and can be transferred to other countries that adopt such regulations. For additional background on vehicle emissions standards, see Chambliss et al. (2013).

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Six of eleven selected markets have yet to adopt Euro 6/VI-equivalent standards for LDVs, HDVs, and fuels, and some lag by two or more levels of emission standards. The implications of this lag are particularly strong for diesel vehicles, which effectively require the latest emission control technologies (e.g., diesel particulate filters) only under Euro 5 for LDVs and Euro VI for HDVs. Table 4 summarizes the vehicle emissions and fuel standards that are currently in effect for all sales and registrations in selected regions; where applicable, adopted regulations that have yet to be implemented are indicated as "Adopted."

Table 4. Light- and heavy-duty vehicle emissions and fuel sulfur standards in selected regions

Region	Percent of world vehicle sales 2013	Emission standards				Fuel sulfur standards			
		Light-duty		Heavy-duty		Gasoline		Diesel	
		Current [a]	Adopted	Current	Adopted	Current	Adopted	Current	Adopted
China	25%	China 4	China 5	China IV		50	10	350	10
US	19%	Tier 2	Tier 3	US 2010		30	10	15	
EU	17%	Euro 5b	Euro 6	Euro VI		10		10	
Japan	6%	PNLT		PNLTES		10		10	
Brazil	4%	L-6		P-7		50		500 (10) [b]	
India	4%	Bharat III	[d]	Bharat III		150		350 (50)	
Russia	3%	Euro 4	Euro 5	Euro IV	Euro V	150	10	350	10
Canada	2%	Tier 2	[e]	US 2010		30		15	
South Korea	2%	Euro 6		Euro V	Euro VI	10		10	
Australia	1%	'Core' Euro 5	Euro 6	Euro V /US07/JE05		150 (50)		10	
Mexico	1%	Tier 1 / Euro 3		US 2004 /Euro IV		150 (30)		500 (15)	
Other countries	*15%*								

Euro-equivalent [c]

Euro 3/III | Euro 4/IV | Euro 5/V | Euro 6/VI | Post Euro 6/VI

[a] *"Current" indicates standards apply to all vehicle sales and registrations. " Adopted" indicates standards that do not yet apply tœall vehicle sales and registrations. Source: TransportPolicy.net*

[b] *Values in parentheses indicate higher quality fuel is available sub-nationally, but not required exclusively nationwide.*

[c] *Euro-equivalent emission standards based on limit values.*

[d] *As of April 2014, Bharat IV standards are in effect in 33 cities including the national capital region; however a nationwide implementation date has yet to be formally adopted.*

[e] *Canada has announced intention to harmonize with the US Tier 3 regulation; however formal adoption is pending.*

From January 2013 through July 2014, several of the top vehicle markets implemented new standards for LDVs and HDVs (Table 5); notably, Brazil and Russia began type approvals for light-duty standards based on Euro 5, while the EU and South Korea began type approvals for heavy-duty Euro VI standards. After several years of delay citing unavailability of high quality fuel, China has begun implementation of China IV standards. For reference, Table 5 summarizes the average reduction in limit values for PM and NO_x compared to the previous standards in each region. While the real-world reductions in emissions depend on a number of

factors, such as the specific emission control technologies utilized, the success of compliance and enforcement programs, and the duty cycle of the vehicle, the regulatory developments since 2013 set a course for significantly improved air quality in over half of selected markets.

Table 5. Regulatory developments for light - and heavy-duty vehicle emissions in 2013-2014

Regulatory development	Percent reduction in emissions [a]	More information
Light-duty vehicles		
Brazil began type approvals for L-6 standards in January 2014. The standard will apply to all sales and registrations in January 2015. While based on Euro 5, L-6 does not include the particulate filter-forcing mass and number emission standards.	PM: **50%** NO_x: **50%**	Technical
Russia began type approvals for Euro 5 vehicles starting in 2014. The standard will apply to all sales and registrations in January 2015.	PM: **80%** NO_x: **25-28%**	Technical
US adopted Tier 3 emission standards, to be phased in from MY 2017 and fully implemented by 2025. Tier 3 emission limits are significantly lower than Euro 6.	PM: **70%** NO_x: **80%**	Technical Policy update (German, 2014)
Heavy-duty vehicles		
China implemented China IV standards for all sales and registrations in July 2013. China IV standards are closely aligned with Euro IV requirements.	PM: **80%** NO_x: **30%**	Technical
EU implemented Euro VI standards for all sales and registrations in January 2014.	PM: **50%** NO_x: **80%**	Technical
South Korea began type approvals for Euro VI standards in January 2014. The standard will apply to all sales and registrations in January 2015.	PM: **50-65%** NO_x: **77-80%**	Technical
Russia began type approvals for Euro V standards in January 2014. The standard will apply to all sales and registrations in January 2016.	NO_x: **43%**	Technical

Implemented Adopted Proposed Delayed implementation

[a] *Percent reductions in PM and NO_x emissions are estimated based on the limit values of the new standard compared to the previously implemented standard in that region. Source: TransportPolicy.net.*

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2.3. Sulfur content of gasoline and diesel on-road fuels

Fuel quality, most notably the sulfur content of gasoline and diesel, is key to the implementation of advanced vehicle emission controls. For optimal function of emissions controls, Euro 3/III vehicles generally require a maximum sulfur content of approximately 350 parts per million (ppm) for diesel and 150 ppm for gasoline, and Euro 6/VI-equivalent vehicles require fuel as low as 10 ppm sulfur. Limiting the sulfur content of fuels also reduces emissions from legacy fleets (Blumberg et al., 2003), and previous research indicates that can be done at less than a few cents per liter (Hart Energy & MathPro Inc, 2012). In fuel importing countries, comprehensive fuel quality regulations can have immediate effects without changes to fueling infrastructure; in fuel producing countries, refinery upgrades can be required or incentivized through relaxed fuel price controls, direct subsidies, or tax incentives.

Progress in reducing sulfur levels in on-road fuels around the world has been significant but uneven since 2001. Currently only six of the selected vehicle markets limit diesel sulfur content to 15 ppm or less nationwide, with China committing to do so by 2018. And while eight of the selected vehicle markets limit gasoline sulfur content to fewer than 50 ppm nationwide, only six have committed to tighten this limit to 10 ppm, the level recommended for world-class vehicle emission controls.

Table 6. Regulatory developments in nationwide fuel quality in 2013-2014

Regulatory development	Fuel sulfur content (ppm)	More information
Gasoline		
Brazil phased out 1000-ppm gasoline in favor of 50-ppm nationwide as of January 2014.	**50**	Technical
China issued a regulation in accordance with a 2013 State Council mandate requiring China V gasoline below 10-ppm sulfur nationwide by 2018.	**10**	Technical Policy update
US adopted Tier 3 emission standards which will reduce gasoline sulfur content from an average of below 30-ppm to below 10-ppm by 2017.	**10**	Technical Policy update
Diesel		
Brazil phased out 1800-ppm diesel in favor of 500-ppm nationwide; as of January 2013, 10-ppm diesel is available in major cities and select stations to fuel P-7 trucks.	Nationwide: **500** Major cities: **10**	Technical
China issued two regulations in accordance with a 2013 State Council mandate requiring nationwide China IV diesel (50-ppm) by 2015, and China V diesel (10 -ppm) by 2018.	2015: **50** 2018: **10**	Technical Policy update

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Implemented Adopted Proposed Delayed implementation

2.4. International Marine Vessels

Emissions of CO_2, SO_x, and NO_x from international marine vessels are regulated by the International Maritime Organization (IMO). Two newly adopted – and one delayed – marine emission reduction policies are summarized in Table 7. In 2013, the Energy Efficient Design Index (EEDI) entered into force, becoming the first regulation to establish CO_2 emission standards across a global sector. EEDI essentially requires new ships to be progressively more efficient from 2015 through 2030, as compared against the average 2000-2010 ships of the same type. For non-CO_2 pollutants, 2014 saw the successful implementation of the newest emission control area (ECA), the US Caribbean Sea ECA, to regulate NO_x and SO_x emissions. ECAs are sea areas that are specially designated by the IMO for enhanced mandatory measures to control air pollution from ships, including maximum fuel sulfur content and exhaust NO_x emission levels (IMO, 2014). Today, ships traveling in ECAs must meet stricter fuel sulfur requirements than elsewhere; and in 2016, new ships will be required to meet special NO_x emission standards (Tier 3) when traveling within ECAs. Following Russia's proposal to delay the implementation of Tier 3 NO_x standards in ECAs, the IMO upheld the 2016 implementation date for existing ECAs (including the US and the Caribbean ECA), but delayed this date for NO_x ECAs entering into force in later years.

Table 7. Regulatory developments in interna tional marine in 2013-2014

Regulatory development	Effect of policy	More information
Efficiency		
Adopted by the **IMO** in 2011, the EEDI entered into force in 2013, applying to all global ships over 400 gross tonnage. EEDI requires new build ships to be 10 % more efficient by 2015, from a baseline representing the average efficiency for ships built between 2000 and 2010.	New build ship efficiency improvement in 2015: **10%** 2020: **20%** 2025: **30%**	Technical
	340 $MtCO_2$ in 2030 (lifecycle)	Publication (Wang & Lutsey, 2013)
Emissions		
The **US Caribbean Sea ECA** became enforceable in January 2014, reducing fuel sulfur content from 3.5% to 1%. This limit tightens to 0.1% sulfur in 2015, and Tier 3 NO_x standards become enforceable in 2016.	Reduction in fuel sulfur: 2014: **71%** 2015: **90%** NO_x reduction from Tier 3: 2016: **74-76%**	Technical
After a **Russian** proposal to delay the implementation	NO_x reduction from Tier 3	Blog

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of Tier 3 NO_x standards to 2021, IMO reached a compromise that upholds implementation in existing ECAs in 2016; Tier 3 in future ECAs will be determined by the date of application approval.	in existing ECAs 2016: **74-76%** Tier 3 NO_x in future new ECAs: **delayed**	(Rutherford, 2014)

Implemented Adopted Proposed Delayed implementation

2.5. International Aviation

Although no new regulations for international aviation emissions have been proposed, adopted, or implemented in the study period, two policy developments at the Ninth meeting of ICAO's Committee for Aviation Environmental Protection (CAEP) merit mention. The first is a new CO_2 certification requirement for new aircraft, which will serve as a key building block for the CO_2 standard under development by ICAO by 2016 (Rutherford, 2013). The second is a revised "Chapter 14" noise standard for new aircraft which will take effect in 2017 and aim to address existing noise problems at airports, notably in Europe (Dickson, 2013).

2.6. Low-carbon fuels

There have been a number of significant low-carbon fuel policy developments in 2013 and early 2014. Table 8 summarizes the low-carbon fuel policies that have recently seen proposed revisions (and are already being implemented) to promote increased deployment of low carbon fuels. The California Low Carbon Fuel Standard (LCFS) was originally proposed in 2009 and has been implemented since 2010. The LCFS is a fuel-neutral performance standard that would reduce average road transport fuel carbon intensity, measured in gram CO_2e per megajoule of fuel, by 10% by 2020 by requiring fuel providers to increasingly mix in lower carbon fuels to displace conventional gasoline and diesel fuels. This regulation would require increasing use of biofuel, natural gas, and electricity with documented low lifecycle GHG characteristics in vehicles through 2020. The LCFS has withstood several legal questions through 2014, is being implemented, and is expected to adopt several revisions in the 2014-2015 timeframe. The US EPA's Renewable Fuel Standard has established various requirements for increasing volume of biofuel (and other eligible renewable natural gas and electricity sources) up to 36 billion gallons through 2022. The requirements include minimum requirements of fuels within given categories, that have associated minimum required GHG reduction(i.e., of 20%, 50% and 60%) below gasoline and diesel fuels. The US RFS policy has added many eligible low-GHG fuel pathways in 2013 and early 2014, and has continued to revise the biofuel volume targets within each fuel category from year to year (see US EPA, 2014).

Table 8. Regulatory developments in low-carbon fuel policy in 2013-2014

Regulatory development	Effect of policy	More information

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California proposed modifications to its Low Carbon Fuel Standard, which requires increasingly stringent road transport fuel GHG intensity (gCO_2e/MJ fuel) reductions from 2011 through 2020. The adopted 2020 goal would require an average 10% reduction by 2020.	**23** $MtCO_2e$ in 2020 [a]	Technical Policy Update
The **US** revised the biofuel volume requirements and established new eligible low-carbon fuel pathways in its Renewable Fuel Standard.	**138** $MtCO_2e$ in 2022 [b]	Technical Policy Update
The **EU** proposed revisions for GHG accounting and added incentives for cellulosic biofuels in its Fuel Quality Directive, which would reduce road transport fuel carbon intensity 6% by 2020. Additionally, the EU proposed caps for particular fuel types in its Renewable Energy Directive, which would bring 10% renewable energy content to the road transport fuel pool.	**62** $MtCO_2$/yr in 2020	Technical Policy update
TOTAL	**223 $MtCO_2$**	

Implemented Adopted Proposed Delayed implementation

[a] *CARB (2009)*

[b] *US EPA (2010)*

c Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014)

We note that there are a number of other fuel-carbon-related policies that are actively being developed, revised, and implemented. Most prominently, the EU's Fuel Quality Directive (FQD) and Renewable Energy Directive (RED) would require that road transport fuel GHG intensity be reduced by 6% (up to 10%) and that transport is 10% fueled by renewable sources by 2020 (European Union, 2009a; European Union, 2009b). The EU's FQD has seen a number of proposed revisions, including related to its inclusion of indirect land use change in the lifecycle GHG accounting and the capping of food and feed-based fuels (Malins and Searle, 2012; Malins, 2014). There are also a number of underlying efforts in EU member states, Canadian provinces, and other US states. Also note that there are other biofuel targets and policies – that are without specific GHG reduction criteria – that are also being implemented, and these are discussed further in Section 3.3.

CHAPTER 3. IMPACT ASSESSMENT OF CLEAN TRANSPORT POLICIES

This chapter provides additional background on regulations in each transport sub-sector, compares regulatory progress among top vehicle markets, and importantly quantitatively assesses the impacts of adopted and potential policies on climate, energy, emissions, and health. Although there are no regulatory updates in international aviation from January 2013 through July 2014, this chapter includes upcoming regulatory opportunities for a global CO_2 standard and market-based measures.

3.1. Energy consumption of light-duty vehicles

Fuel efficiency and GHG standards for light-duty vehicles (LDVs) have a strong record of success in reducing fuel consumption and GHG emissions of passenger cars, light trucks, and sport utility vehicles (SUVs). Fuel economy regulations were first implemented in the US in the 1970s to reduce vulnerability to the price volatility of oil imports. After initial gains, LDV efficiency in the US stalled as technology improvements were offset by increases in vehicle size and performance. Other regions such as Japan and Europe pursued a combination of high fuel taxes and fiscal measures to encourage the sale of more efficient vehicles. In recent years, many of the largest markets have adopted or implemented mandatory fuel efficiency and GHG standards to ensure that new vehicle fleets become progressively more efficient and utilize available and emerging cost-effective technologies.

Context

Most of the world's top vehicle markets have adopted regulations requiring vehicle manufacturers to improve the energy efficiency of new passenger vehicles, or LDVs. Such standards set targets for new vehicle fleets based on CO_2, GHG emissions, fuel consumption, or fuel economy (see Box 4); these vehicle efficiency standards are differentiated from vehicle emission standards, which limit emissions of local air pollutants from vehicles.

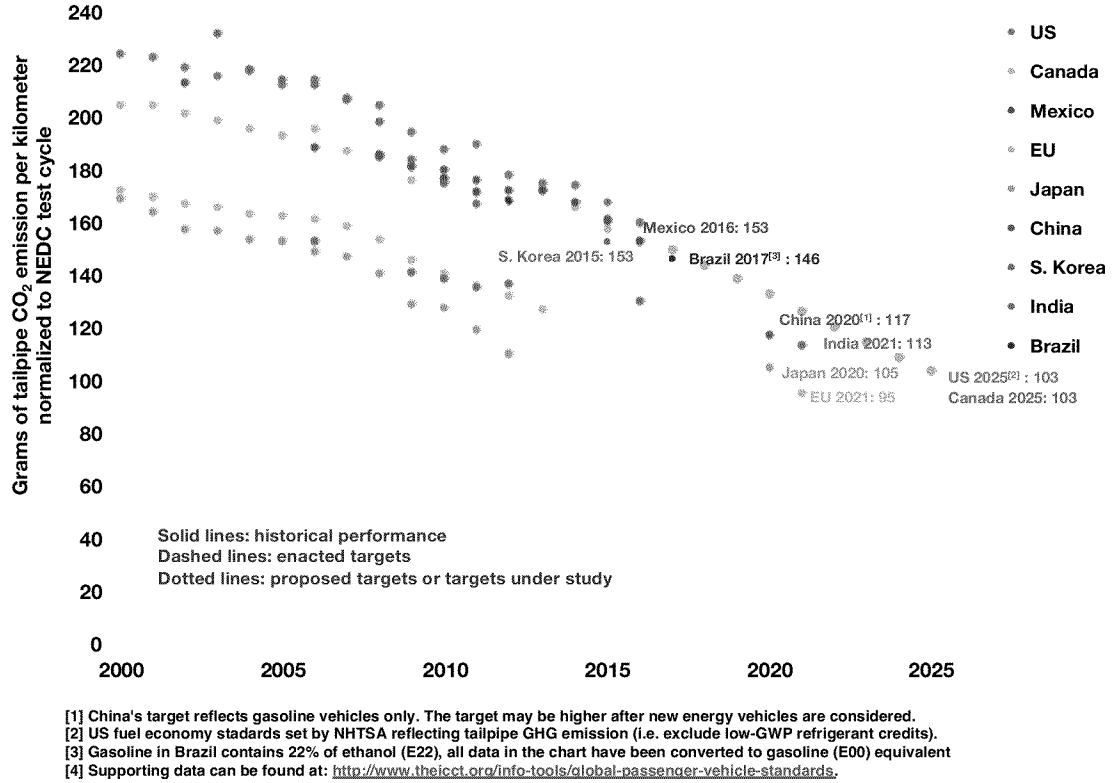
Efficiency standards for LDVs have proven to be a highly cost-effective means of cutting CO_2 emissions: recent regulations in the US, EU, and China have resulted in fuel savings that pay off the incremental vehicle costs within one to five years (Federal Register, 2010; Façanha et al., 2012). The ICCT compares corporate average vehicle efficiency requirements for the new fleet across countries that have adopted efficiency standards or comparable fiscal instruments (Figure 4 & Figure 5). We also note that North American standards include passenger cars, light trucks, and sport utility

Box 4. Metrics for vehicle efficiency and GHG standards

Depending on the regulatory authority and objectives of the standard-setting agency, some regulations set targets for fuel consumption (e.g. MJ/km, L/100km) or fuel economy (e.g. mpg, km/L), while others directly target CO_2 or GHG emissions (grams CO_2/km, grams CO_2e/mile); still others include targets for both. For ease of comparison, these policies are collectively referred to as "efficiency standards" throughout this report.

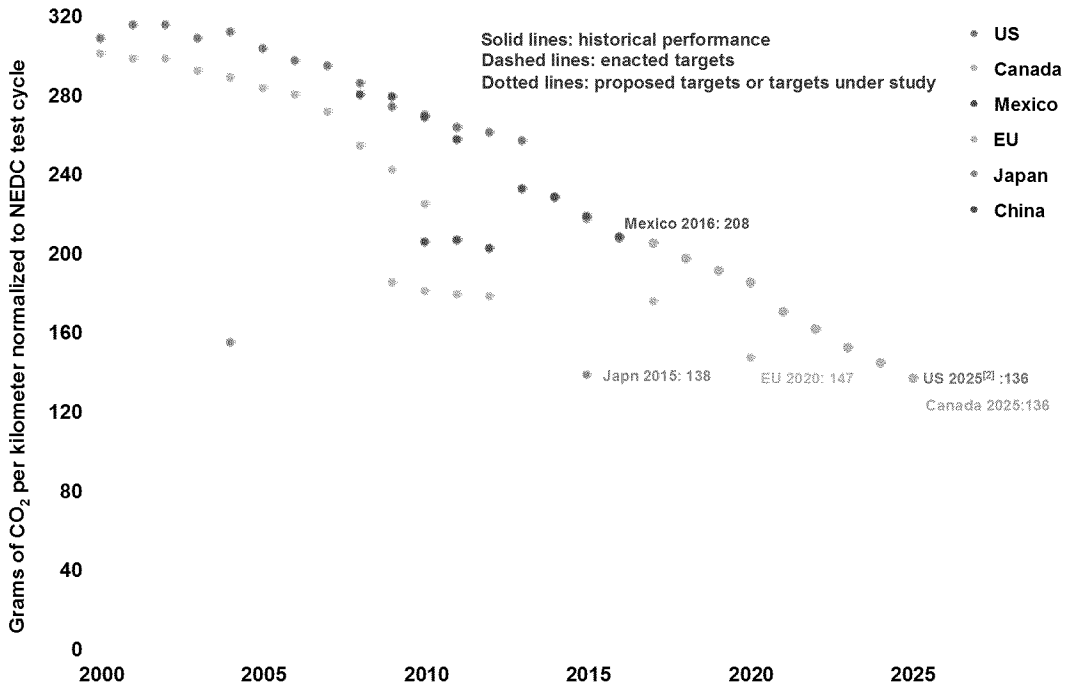
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vehicles, while the EU addresses passenger cars and vans (LCVs) in separate regulations. To date, the US has adopted the longest regulatory timeline for LDV GHG standards out to 2025, and Canada is expected to harmonize with the US regulations. For China, the EU, Japan, and India, the stringency of standards for the 2021-2025 period could determine the global leader in passenger vehicle efficiency. In Brazil, South Korea, and Mexico, the next several years are a critical period to determine whether these will keep pace with other top vehicle markets.



[1] China's target reflects gasoline vehicles only. The target may be higher after new energy vehicles are considered.
[2] US fuel economy stadards set by NHTSA reflecting tailpipe GHG emission (i.e. exclude low-GWP refrigerant credits).
[3] Gasoline in Brazil contains 22% of ethanol (E22), all data in the chart have been converted to gasoline (E00) equivalent
[4] Supporting data can be found at: http://www.theicct.org/info-tools/global-passenger-vehicle-standards.

Figure 4. Global comparison of passenger car efficiency standards (He & Yang, 2014c)

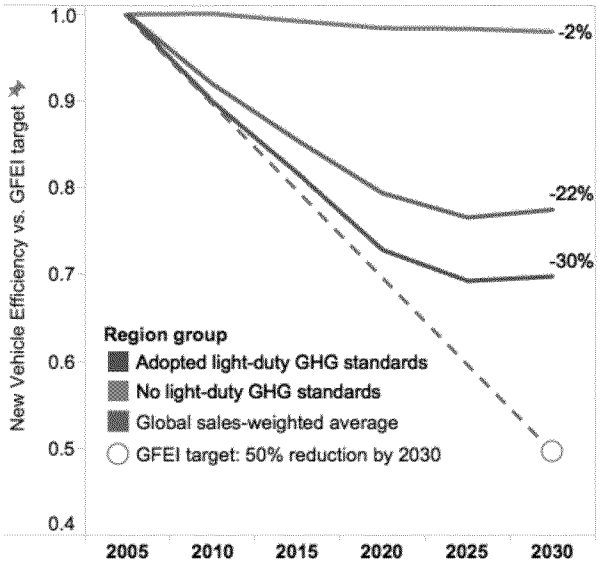


[1] China's target re□ects gasoline vehicles only. The target may be higher after new energy vehicles are considered. !
[2] US standards GHG standards set by EPA, which is slightly different from fuel economy stadards due to low-GWP refrigerant credits.!
[3] Supporting data can be found at: http://www.theicct.org/info-tools/global-passenger-vehicle-standards.!
!

Figure 5. Global comparison of light commercial vehicle efficiency standards (He & Yang, 2014c)

Outlook and projections

Recent progress in light-duty efficiency regulations highlights the potential for further improvements in these regions, and further expansion to growing vehicle markets. The ICCT is a partner of the Global Fuel Economy Initiat ive (GFEI), a consortium that aims to halve the fuel consumption of new LDVs from 2005 to 2030 by strengthening and expanding the adoption of LDV efficiency standards (GFEI, 2014). Figure 6 compares progress under LDV efficiency standards adopted to date with the 2030 GFEI target. Some countries are on track to meet GFEI targets based on their adopted standards: the US 2017-2025 rule is expected to achieve this target five years early; Japan and the EU could achieve the GFEI target with the adoption of 2025 standards. China's adopted Phase 3 standards will achieve about one-third of the targeted improvements; while Phase 4 will push progress further, follow -up 2025 standards are needed to reach the GFEI target. Mexico and Canada could get close to the GFEI target by harmonizing with the US through 2025; similarly, South Korea and Brazil would have to move relatively quickly to meet the target, likely with two phases of standards. Russia and Australia have yet to adopt efficiency standards and will likely need several consecutive phases of standards to reach the GFEI target. Most countries outside of the selected markets have yet to adopt such standards; developing standards in these growing markets should be a priority alongside working on the next phases of standards in developed markets.



		2030	
		% of total sales	% reduction in new vehicle fuel consumption (2005 baseline)
Adopted light-duty GHG standards	China	**26%**	**-15%**
	EU-28	**15%**	**-40%**
	U.S.	**15%**	**-50%**
	India	8%	-26%
	Japan	3%	-38%
	Brazil	3%	-12%
	Canada	2%	-24%
	Mexico	2%	-19%
	South Korea	1%	-24%
	Average	**76%**	**-30%**
No light-duty GHG standards	Russia	4%	0%
	Australia	1%	-9%
	Other countries	**19%**	**-1%**
	Average	**24%**	**-2%**
Global Average		**100%**	**-22%**

Figure 6. Progress of new light-duty vehicle efficiency toward the 2030 GFEI target

Sales-weighted averages include projected sales of passenger cars and light commercial vehicles through 2030.

Figure 7 compares projected LDV CO_2 emissions under three scenarios. Compared to business-as-usual trends, standards adopted to date will reduce annual lifecycle emissions by 1.5 $GtCO_2$, equivalent to 7.4 mbd, in 2030. Going further, meeting GFEI targets could largely stabilize global CO_2 emissions from LDVs from 2020 on despite rapid growth in vehicle activity, cutting emissions by an additional 0.95 $GtCO_2$ annually by 2030. Assuming that there are minimal net changes to the global lifecycle carbon intensity of fuel over this time, efficiency standards that achieve GFEI targets would cut fuel consumption in 2030 by 4.9 mbd from fuel consumption with adopted policies.

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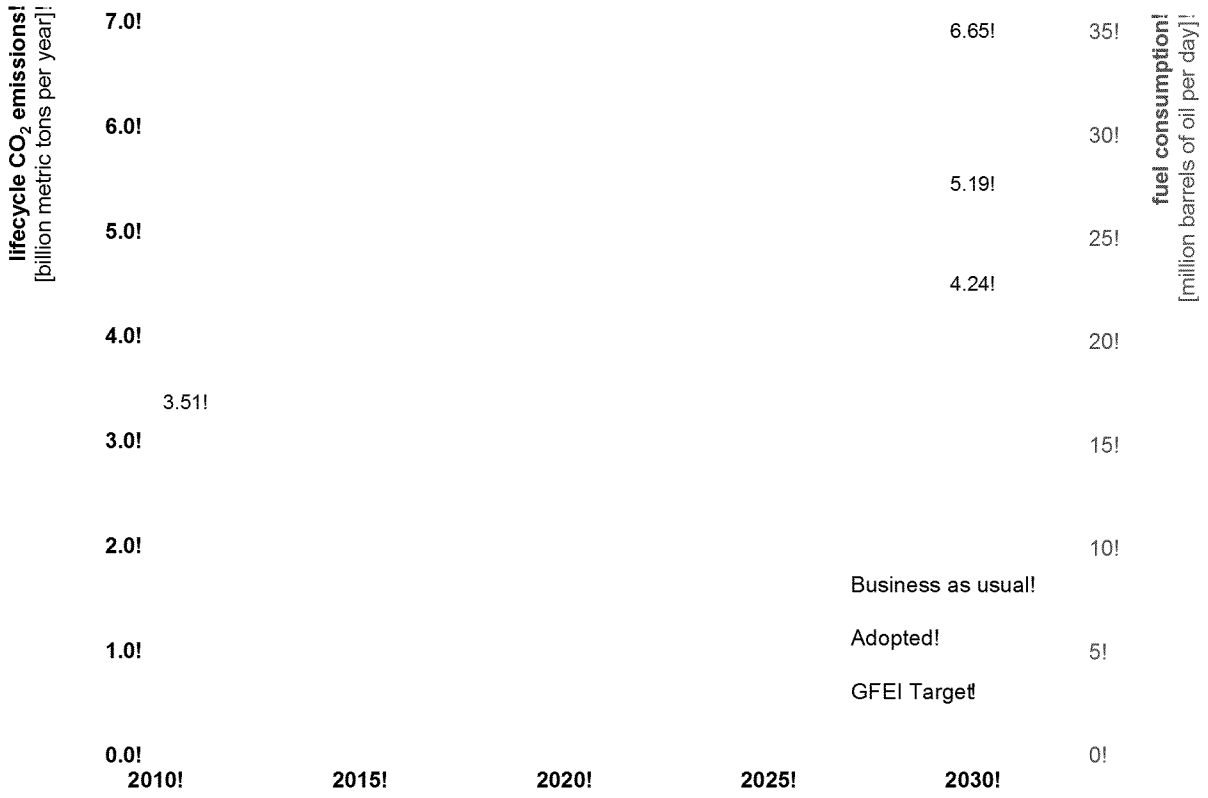


Figure 7. Impact of light-duty efficiency standards on global lifecycle CO_2 emissions

Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014). ***Business as usual*** *= vehicle efficiency remains at 2005 levels.* ***Adopted*** *= currently adopted policies.* ***GFEI Target*** *= countries adopt standards that reduce average fuel consumption of new vehicles to 50% below 2005 levels by 2030 (GFEI, 2014).*

Electric-drive vehicles

As vehicle emissions and efficiency and GHG standards become increasingly stringent, they help to encourage the integration of advanced technologies, lightweight materials, and zero-tailpipe emission electric-drive technologies. Electric-drive vehicles, including plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), and fuel cell electric vehicles (FCEVs), are becoming increasingly competitive with conventional internal combustion engines with respect to range, performance, and cost. Electric vehicles still account for a small share of overall passenger car sales – less than one percent in most of the top vehicle markets in 2013, with higher shares in the US (1.3% nationwide, and 4% in California), the Netherlands (5.6%) and Norway (6.1%) (Mock & Yang, 2014). However, there has been rapid growth in the number of models available, for example from nine in 2012 to seventeen in 2013 in the US (InsideEVs, 2014). Moreover, total sales of BEVs and PHEVs have exploded since 2009, doubling year-over-year from 2011 to 2012, and again from 2012 to 2013 (Figure 8) (Mock and Yang, 2014). While the bulk of these sales have occurred in the US, EU, Japan, and China, numerous regions have adopted tax exemptions, direct subsidies, and other non-fiscal incentives to encourage the sale of electric-drive vehicles. Besides different forms of incentives, perhaps the most significant electric-drive vehicle policy to date is California's Zero Emission Vehicle (ZEV) mandate, which requires manufacturers to meet an increasing share of vehicle sales with

PHEV, BEV, and FCEV technologies. As a result of the ZEV mandate electric-drive vehicles are forecast by CARB analysts to account for 15% of model year 2025 vehicles sold in California (CARB, 2012). In addition to direct incentives, many adopted efficiency standards provide credits to accelerate the development and commercialization of advanced technologies, including electric-drive vehicles. These vehicles will become increasingly important to achieve long-term decarbonization of on-road transport; as such, achieving this potential will benefit from early policy action on multiple fronts, including light-duty efficiency standards, direct incentives, and supporting infrastructure investments.

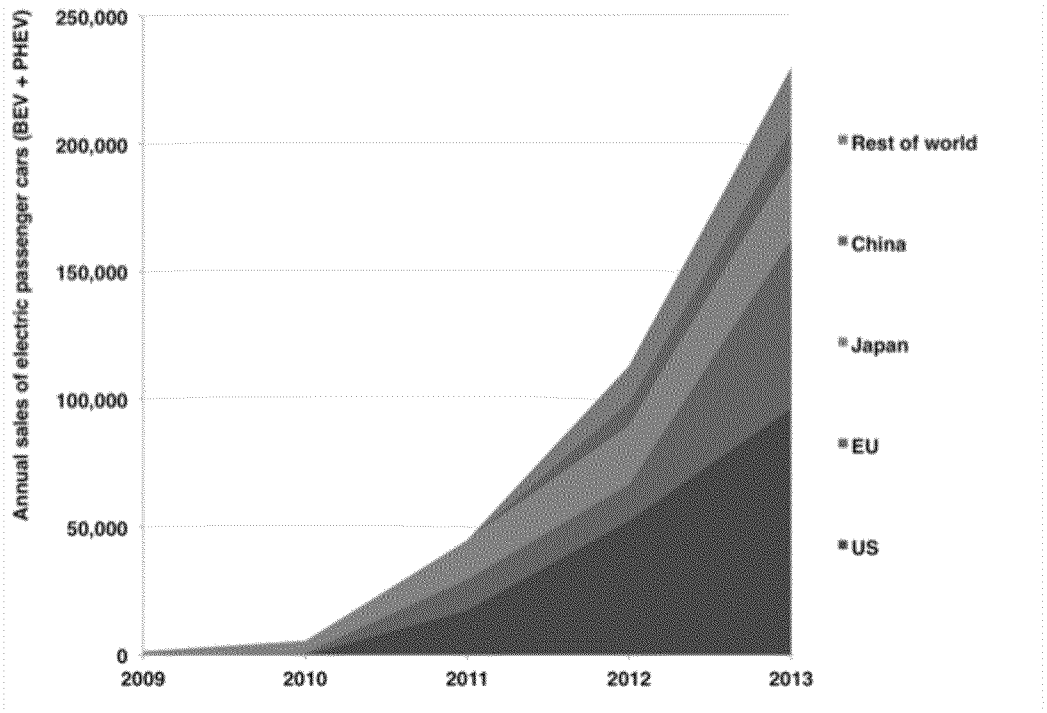


Figure 8. Annual global sales of electric passenger cars, 2009-2013 (Mock & Yang, 2014)

3.2. Energy consumption of heavy-duty vehicles

Heavy-duty vehicles (HDVs) encompass a wide range of vehicle types, including large pickups, delivery trucks, long-haul tractors, refuse trucks, urban buses, and coaches. The diversity of heavy-duty fleets – both in vehicle characteristics and duty cycles – makes regulating their fuel consumption and GHG emissions more challenging than for LDVs. Key components of HDV regulations include the metric for efficiency or GHG emissions, vehicle types covered (segmentation), test methods for certification, and means of enforcement.

Context

To date, only four markets have adopted national efficiency regulations for heavy-duty trucks and buses (Japan, the US, Canada, and China). The first HDV GHG regulations in the US and Canada are just now coming into effect. And while Japan adopted its Phase 1 standard as early as 2005, it will not become fully enforceable until 2015, the same year as China's recently

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adopted Phase 2 regulation. In addition to regulations for new vehicles, California requires in-use long-haul tractors and box-type trailers – the highest fuel-consuming segment of heavy-duty trucks – to retrofit or replace affected vehicles with certified aerodynamic technologies and low rolling resistance tires.

Studies by the National Academy of Sciences (2010) and TIAX (2009) for the US market and AEA-Ricardo (2011) and TIAX (Law et al., 2011) for the European market have found a technical potential to reduce the fuel consumption of most types of HDVs by 40% to 50%from 2009 to 2020. A comparison of the estimated reductions in fuel consumption indicates that Japan, China, the US, and Canada will capture roughly a third of this potential by 2020 with adopted regulations (Figure 9).

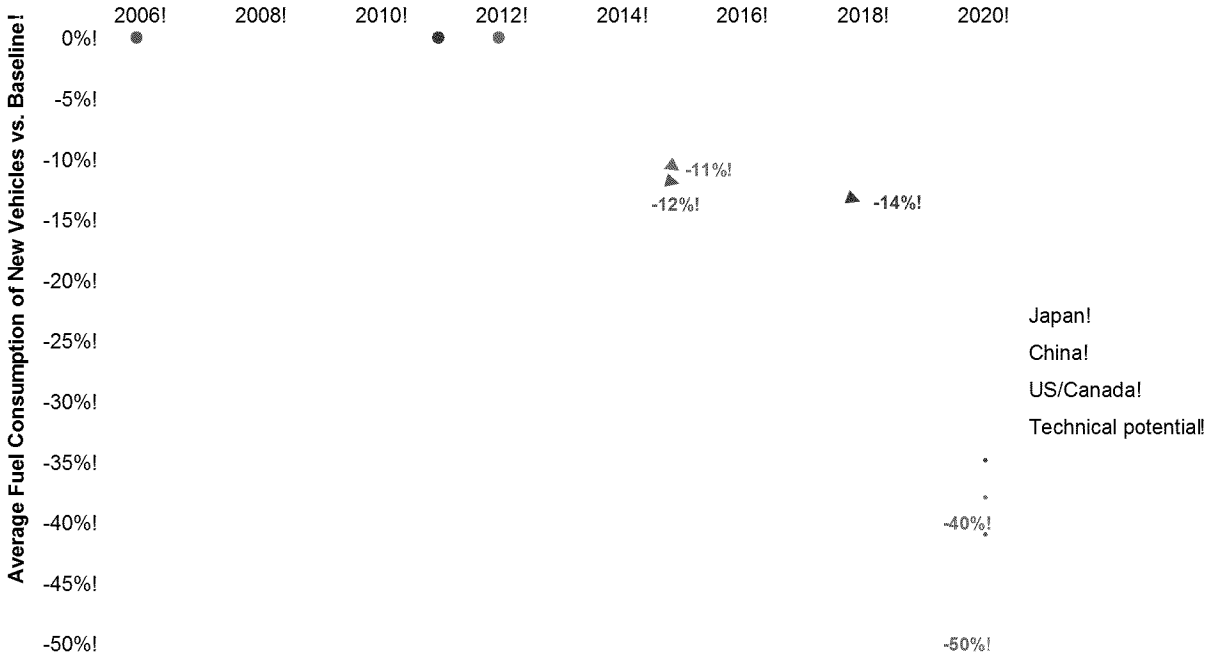


Figure 9. Global comparison of heavy-duty vehicle fuel consumption and GHG standards

Annual reduction in fuel use estimated fromvehicle activity-weighted fleet averageover the duration of the regulation. Improvements shown beginning in year enacted.

Outlook and projections

Additional heavy-duty efficiency regulations are under consideration in major markets around the world. Beyond the existing four regulated markets (i.e., Japan, US, Canada, and China) there is also activity toward HDV efficiency standards in the EU, South Korea, and Mexico. In North America, the US and Canada have begun work on Phase 2 efficiency standards, which are anticipated to apply to new 2019 and later models (Lutsey, 2014). While Mexico has harmonized with US light-duty standards with a delay of several years, a recent tripartite commitment with the US and Canada shows promise for harmonization of heavy-duty efficiency and emissions regulations (Blumberg, 2014). China is also working toward its next phase of

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standards for 2020 and later HDVs. These markets (China, the US, the EU, Japan, Canada, South Korea, and Mexico) accounted for over two-thirds of global heavy-duty freight activity (tonne-km) and energy use in 2010 (ICCT, 2014). In addition, a number of countries around the world are also investigating voluntary green freight programs that would provide in-use fleet efficiency improvements and could serve as building blocks toward future efficiency standards.[2] The policies which are currently under discussion could result in significant fuel savings to owners and operators; while payback periods vary by regulatory design, vehicle type, and region-specific activity patterns, HDV standards in this timeframe typically have payback periods of one to four years.

Figure 10 compares projected CO_2 emissions from the global HDV fleet under three scenarios. Adopted policies, along with slight gains in global efficiency since 2005, are forecast to reduce emissions by 0.31 $GtCO_2$ by 2030, equivalent to 1.5 mbd, as compared to business-as-usual trends in the absence of standards. However, if vehicle activity of buses and trucks continues to grow according to recent trends, HDV efficiency would need to improve at a faster rate going forward to stabilize GHGs and fuel consumption. The *Technical Potential* trajectory assumes that new HDV standards improve fuel consumption by 3.5% annually starting in 2020 in the selected vehicle markets, and 2025 in the rest of the world. This level of progress could curb growth in global HDV emissions over the next 15 years and save an estimated 0.59 $GtCO_2$ annually in 2030, equivalent to 2.8 mbd.

[2] Green freight programs are voluntary initiatives that encourage the introduction of efficiency technology and implementation of operational measures to improve truck efficien cy.

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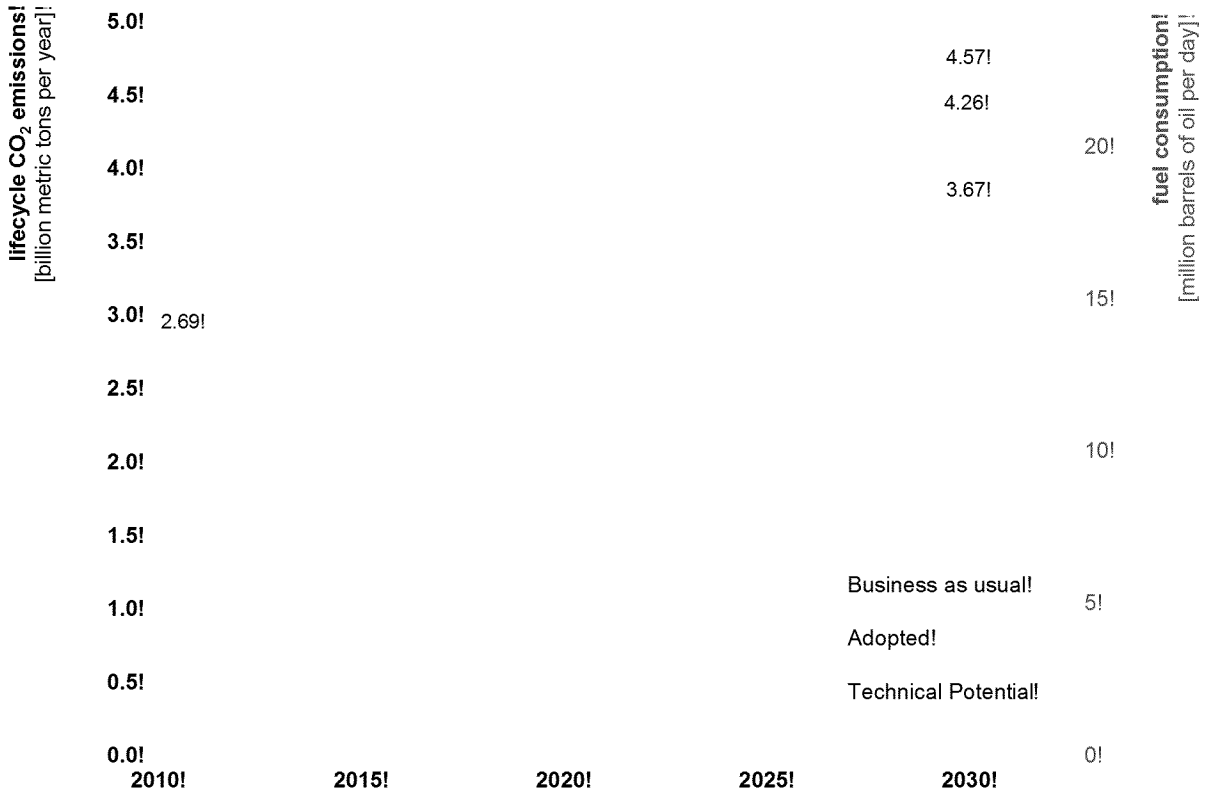


Figure 10. Impact of heavy-duty efficiency standards on global CO_2 emissions

Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014). ***Business as usual*** *= vehicle efficiency remains at 2005 levels.* ***Adopted*** *= currently adopted policies.* ***Technical Potential*** *= new HDV standards improve fuel consumption by 3.5% annually starting in 2020 in eleven of the top vehicle markets, and 2025 in the rest of the world.*

3.3. Carbon intensity of on-road fuels

Since the mid 2000s, a number of governments have aimed new policies at promoting alternative fuels in the transport sector. Prominent alternative transport fuel sources that governments are encouraging to support their climate mitigation goals include biofuels, lower carbon fossil fuels (e.g., natural gas), and electricity. These policies tend to have a number of objectives, including to increase fuel diversity in the transport sector by displacing oil usage, to reduce the lifecycle carbon intensity of transport fuels, and to increase agricultural economic development. This section considers use of alternative transport fuel policy to reduce lifecycle GHG emissions.

Context

Table 9 summarizes major efforts over the last ten years to promote alternative fuels. By and large these policy goals are stated in the form of volumetric biofuel targets, with smaller targets of 0.1-1.0 billion gallons per year in countries like Japan and Australia and up to 36 billion gallons per year in the US in 2022. The policies in the US (including California) and the EU include specific regulatory GHG emission and fuel requirements for fuel providers to

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increasingly mix lower-carbon fuels, including low-GHG biofuels, renewable natural gas, and renewable electricity, into the transport fuel supply.

Table 9. Summary of policies to promote alternative fuels in transport

	Policy name	Biofuel-related targets
EU	Renewable Energy Directive (RED)	10% renewable energy in transport by 2020
	Fuel Quality Directive (FQD)	6% reduction in fuel GHG intensity by 2020
US	Renewable Fuel Standard (RFS)	36 billion gallon/year of biofuels by 2022
California	Low Carbon Fuel Standard (LCFS)	10% reduction in fuel GHG intensity by 2020
China	National Plan	4 billion gal/year by 2020, E10 in 10 provinces.
India	National Policy on Biofuels	Increasing to 20% by 2017.
Canada	Renewable Fuel Standard	5% ethanol in 2010 gasoline, 2% biodiesel 2012
Mexico	Law for the promotion and development of bioenergy	2% biofuel usage in selected areas (Guadalajara, Monterrey, Mexico City) by 2011-2012
Japan	Biomass Nippon Strategy	1 billion gal/year by 2030
Australia	Energy Grants Scheme; Ethanol Production Grants	0.1 billion gal/year biofuels by 2010
Brazil	Mandatory Biodiesel Requirement; Ethanol fuel program	5% biodiesel by 2010; 25% ethanol by 2007

Source: Malins et al. (forthcoming). "E10" = 10% ethanol, 90% gasoline

As indicated above, many countries have now established targets for increased biofuel deployment for future years. From a GHG mitigation perspective, the most significant of these global alternative fuel policy efforts are those in the US and EU. In the US, there are two major alternative fuel policies that require accounting of, and reduction in, transport fuels' lifecycle carbon intensity. The national US Renewable Fuel Standard (RFS) provides specific minimum lifecycle GHG-reduction requirements for biofuels within several different biofuel categories. The California's Low Carbon Fuel Standard goes further, placing specific fuel carbon ratings on all distinct biofuels, and using an increasingly stringent performance standard to reduce the average lifecycle carbon intensity of all on-road transport fuels sold in California through 2020. The EU's Fuel Quality Directive (FQD) similarly utilizes a performance standard to require a reduction in the average on-road fuel supply's greenhouse gas intensity. The EU, US, and California policies have moved toward greater rigor, analysis of more fuel pathways, and comprehensive lifecycle accounting of land use effects to better differentiate the sustainable fuels that are reliably low carbon. Although not listed in the table, a number of EU member states (e.g., Germany, United Kingdom) are developing programs within the EU directive

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framework. In addition, several Canadian provinces (e.g., British Columbia) and other US states (e.g., Oregon) also are developing and implementing biofuel and low-carbon fuel policies.

Outlook and projections

As indicated above in Chapter 2, the EU, US and California are still actively developing their policies, addressing key challenges related to how they promote various fuels (biofuel, fossil fuel, and electric-drive fuel sources). Critical attributes of these EU and California policies include their ability to account for, monitor, and incent improved actions with respect to the lifecycle emissions of fossil fuels. For example, one key determinant is if and how the regulations account for, and discourage deployment and investment in, fuels with *higher* upstream carbon emissions, like Canadian tar sands and Venezuelan heavy oils, that can have 15-20% or greater GHG emission than conventional crude oil. Fuel policy that clearly disincentivizes the use of high-carbon fossil fuels for transport are lacking, with the possible exception of California's LCFS.

Another important factor in these fuel carbon policies is whether and how the regulations can increasingly promote only fuels with reliably low lifecycle carbon, low indirect land use, and minimal food system interaction For example, most of the biofuel policies are driving conventional biofuels (i.e., from corn, soy, wheat, and rapeseed) with relatively high GHG emissions. On the other hand, recent EU-based findings indicate that up to 16% of road transport fuel could be derived from low-carbon waste-based sources by 2030 (Harrison et al., 2014). This could be indicative of how fuels policy can shift from older conventional food-based feedstocks toward lower land-intensity and lower-carbon feedstocks.

As indicated above, California and the EU each continue to evaluate and revise their detailed provisions to strengthen their policies toward reducing fuel carbon intensity by 10% and 6%, respectively, in the 2020 timeframe. As a result of the relatively early and somewhat "in flux" nature of global low-carbon policies, we assess only rather limited scenarios for the potential GHG reductions that would result from such policies. With respect to adopted policies, California's and EU's low-carbon fuel policies are intended to reduce fuel carbon intensity by 10% and 6%, respectively, in the 2020 timeframe. The technical potential scenario considers the global implementation of low-carbon fuel policies that result in a 10% reduction in the lifecycle GHG intensity of on-road fuels that is phased in from 2020-2030. This potential represents a simplistic extrapolation of the California and EU-style objectives and would require technology breakthroughs in the use of advanced low-carbon fuels and electric drive vehicles. Over the long-term, developing low-carbon fuel policies to especially promote electric drive, powered by de-carbonized electricity (and hydrogen), will be a key long-term climate stabilization goal for the transport sector.

3.4. Energy consumption of international marine vessels

Rapid growth in the demand for global goods movement has resulted in a doubling of CO_2 from international shipping from 1990 to 2007, and today marine accounts for 1 $GtCO_2$ each year, the

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equivalent of 11% of CO_2 emissions from transport (Wang & Lutsey, 2013). In the absence of actions to limit international marine GHG emissions, emissions could increase by two-thirds by 2030. Since 1997, the Marine Environmental Protection Committee (MEPC) of the International Maritime Organization (IMO) has held the responsibility to regulate emissions from international marine vessels.

Context

In 2011, the MEPC adopted the Energy Efficient Design Index (EEDI), the first regulation to establish CO_2 standards across a global sector. The initial regulation applied to all new cargo ships weighing more than 400 gross tons, which account for 72% of CO_2 emissions from newly built ships (Hon & Wang, 2011), with additional ship types being added over time. The EEDI will improve the efficiency of new ships by 10% in 2015, 20% in 2020, and 30% in 2025, from a baseline representing the average efficiency for ships built between 2000 and 2010, and is expected to prevent the release of more than 340 $MtCO_2$ each year by 2030 (Wang & Lutsey, 2013).

In addition, implemented concurrently with the EEDI, the Ship Energy Efficiency Management Plan (SEEMP) establishes mechanisms for companies and operators to improve the efficiency of ship operations. The IMO establishes guidelines for planning, implementing, and monitoring best-practice efficiency strategies for in-use ships. These guidelines lay the foundation for future measures to improve operational eficiency, including a potential efficiency standard for in-use ships. The importance of in-use efficiency is augmented by the long lifetimes of marine vessels and wide variation of in-use performance across similar vessels. Figure 11 shows the variation in technical design CO_2 intensity (how ships are designed to perform) and in -use CO_2 intensity (how ships actually operate) within the international container shipping fleet in 2011. The EEDI will improve the technical design emissions of newly built ships, and in-use measures such as SEEMP and MBMs will improve the operations of existing ships.

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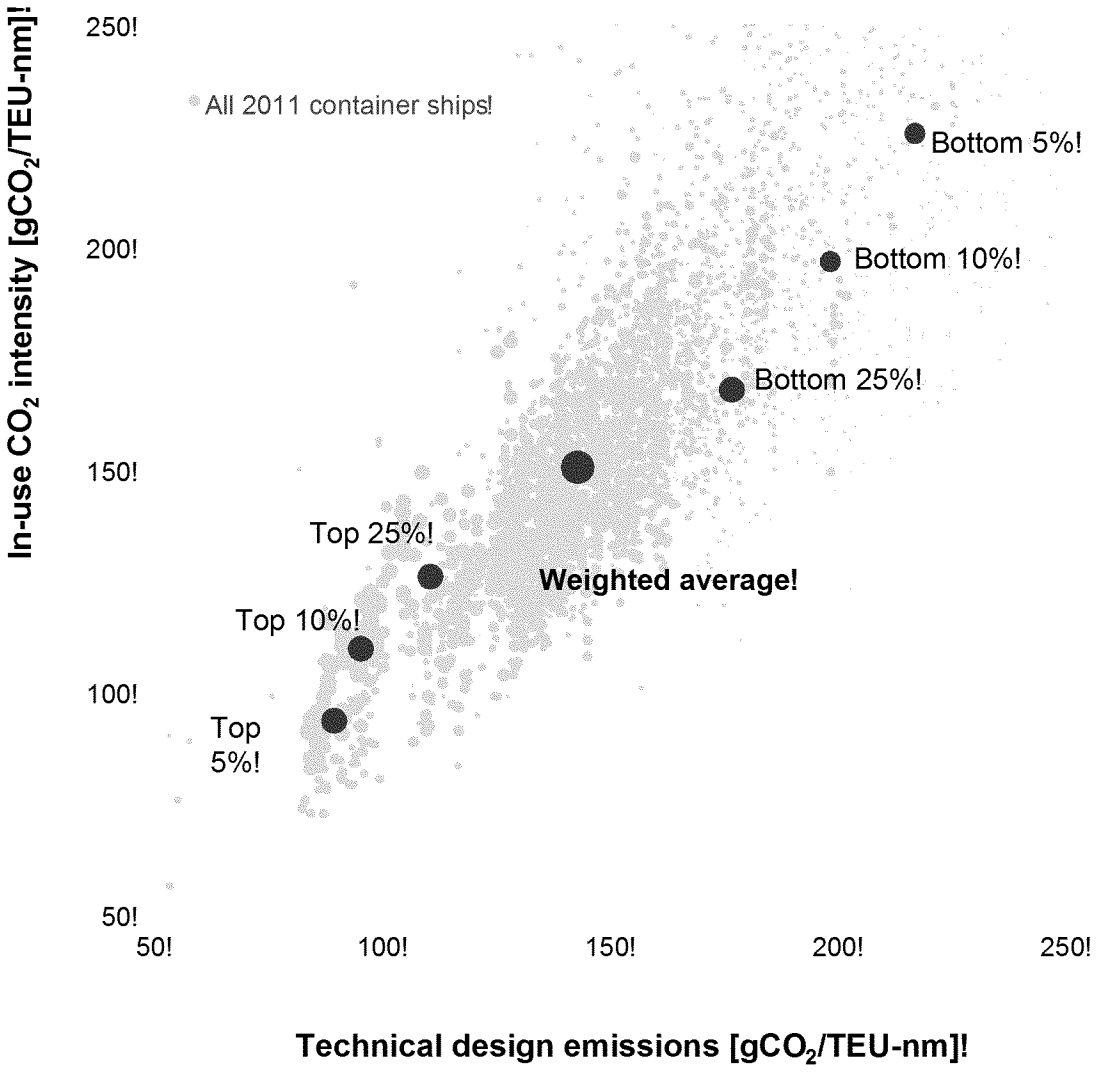


Figure 11. Technical and in-use CO_2 from 2011 containerships (Wang & Lutsey, 2013)

TEU-nm refers to a 20-foot equivalent unit, a measure based on the cargo capacity of a 20 -foot-long intermodal shipping container.

Recognizing the importance of measures to boost in-use ship efficiency, the IMO began discussing monitoring, reporting, and verification (MRV) provisions leading to mandatory in -use efficiency requirements at the 2011 MEPC meeting, with support building from key nations and industry at each subsequent meeting. Most recently, at the April 2014 MEPC meeting, a formal working group was formed to deliberate on the issue. The working group, which held constructive discussions at that meeting with minimal resistance from industry, will continue to work as an inter-sessional correspondence group through 2014.

Outlook and projections

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Table 10 provides background on major regulatory developments within the IMO toward improving marine efficiency. These developments cover formal invitations to regulate harmful pollutants, major technical studies, adoption, and implementation of policies. Established implementation dates are also included beyond 2014. As shown, the critical benchmarks for increased new ship efficiency are 2015 (10% increased efficiency), 2020 (20%), and 2025 (30%).

Table 10. Timeline of regulatory developments for marine efficiency within the IMO

Year	Regulatory Development
1997	MARPOL invites MEPC to consider feasible CO_2 reductions for ships
2000	First IMO study on GHG emissions from ships
2003	IMO urges MEPC to develop mechanisms to limit GHG emissions
2009	MEPC finalizes a suite of technical and operational GHG reduction measures
2010	MEPC considers mandating technical and operational measures irrespective of flag and ownership
2011	First ever mandatory GHG reduction regime for an entire industry, including technical (EEDI) and operational (SEEMP) measures
2013	EEDI and SEEMP enter into force for all ships over 400 gross tonnage
2015	New ships must be **10%** more energy efficient (EEDI)
2020	New ships must be **20%** more energy efficient (EEDI)
2025	New ships must be **30%** more energy efficient (EEDI)

In addition, there is the potential for much greater climate mitigation from IMO policies that promote efficient shipping technologies and practices. Figure 12 shows projected CO_2 emissions from international shipping under three scenarios (based on Wang & Lutsey, 2013). The first two scenarios compare shipping emissions with and without the EEDI standards that are now being implemented. The third scenario investigates the effect of technology-focused measures beyond EEDI that improve the efficiency of new ships 1.5% per year from 2025 on, combined with operational measures that improve in-use efficiency 1% per year starting in 2015. The results indicate that by 2030, the successful implementation of the EEDI will cut lifecycle CO_2 emissions by an estimated 0.34 $GtCO_2$ per year. Expanded policy progress to improve shipping technology and operations could stabilize shipping emissions at 2010 levels despite a significant increase in the demand for global goods transport.

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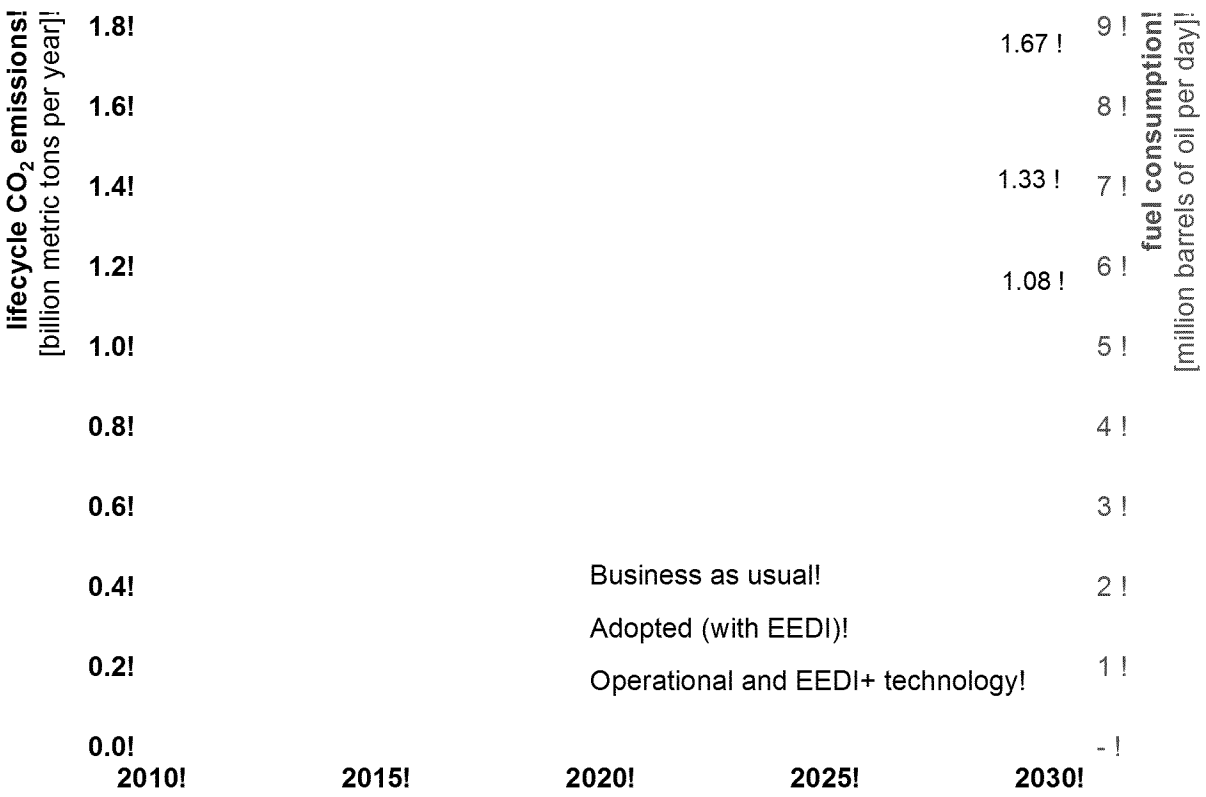


Figure 12. Shipping fleet CO_2 emissions with EEDI and improved technology and practices for in-use ship efficiency (Based on Wang & Lutsey, 2013)

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3.5. Energy consumption of international aviation

After rapid gains in fuel efficiency from 1960 to 1990, the average fuel efficiency of new aircraft since 1990 has only improved by roughly 10% (Figure 13); over this same period, aviation activity for both passenger travel (measured in seat-km) and freight transport (measured in ton-km) grew by roughly a factor of 2.5. Since 2000, aviation activity has continued to grow, but the efficiency of new aircraft has stagnated, resulting in a 3% to 4% annual increase of aviation greenhouse gas emissions. Aviation accounts for about 11% of CO_2 emissions from transport (Façanha et al., 2012). If trends continue, aviation CO_2 emissions could double by 2030.

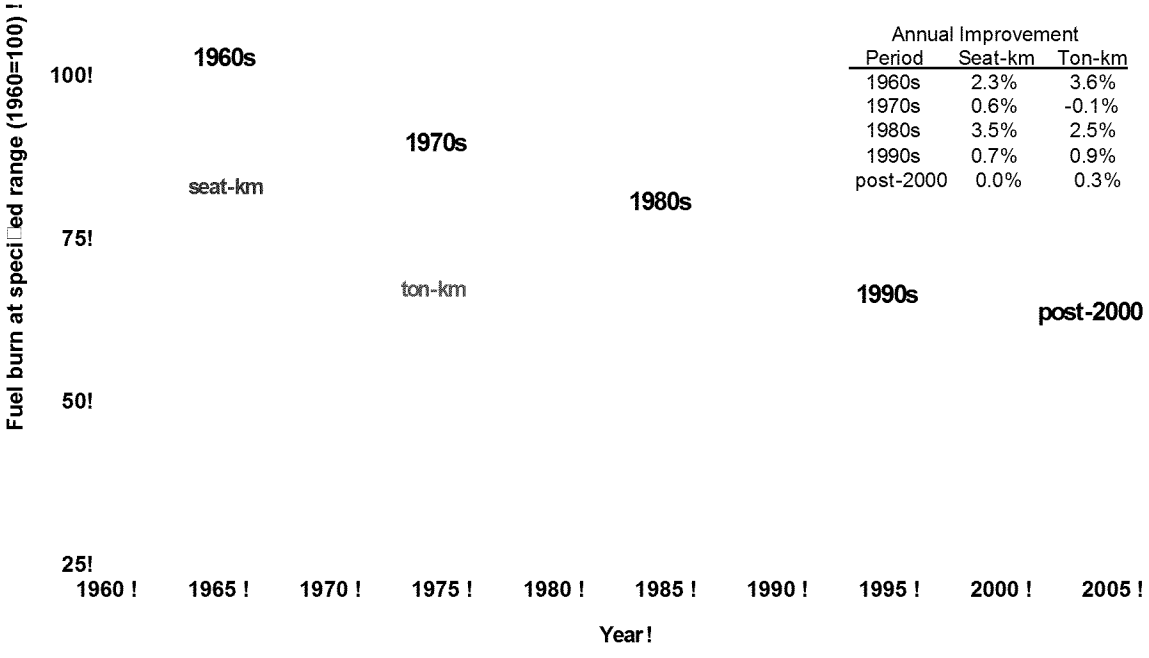


Figure 13. Average fuel burn for new aircraft, 1960-2008 (Rutherford & Zeinali, 2009)

Context

In October 2010 the International Civil Aviation Organization (ICAO) established a 2% annual fuel efficiency goal (aspirational from 2020 to 2050) along with the target of carbon neutral growth from 2020 (Hupe, 2011). Other regions, notably the EU, support even more aggressive goals (10% below 2005 levels by 2020) and have adopted regional measures consistent with these goals. Between 1991 and 2009, international aviation fleetwide fuel intensity fell by 2.5% annually on a tonne-kilometer basis, while aviation demand grew by 4.2% annually (World Bank, 2014). Coordinated, near-term international policy action will be needed if ICAO's goals are to be met by 2020.

Outlook

In 1997 ICAO was given responsibility for regulating international aviation emissions under the Kyoto Protocol. ICAO began the scoping process for a global CO_2 standard for new aircraft in 2009 and committed to developing such a standard in 2010; however, progress has been slow, and ICAO is now expected to deliver a standard by 2016. As of April 2014, ICAO has not yet

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determined whether to cover newly delivered aircraft that have already received type certificates – called "new in-production aircraft" – in addition to new "clean sheet" designs. ICAO is still determining the stringency of such a standard, which will be a key contributor to meeting ICAO's goal of 2% annual improvements in aircraft fleet efficiency through 2050.

In addition to a CO_2 standard, which would only affect newly delivered aircraft, ICAO member states have been working towards developing a framework since 2010 for a market-based measure (MBM) for international aviation. In 2012, in the absence of global action toward market-based measures, the EU decided to include international aviation in its Emissions Trading Scheme (ETS), sparking opposition from other ICAO member states to the EU's unilateral action. In response, the EU agreed to postpone the inclusion of international aviation in its ETS until 2017 to allow time for ICAO to agree on a global MBM framework. In 2013, ICAO agreed to develop a global MBM and come up with a proposal for a global MBM scheme by 2016 for implementation by 2020 (ICAO, 2013). Simultaneously, the US EPA is required to soon determine whether GHG emissions from aircraft endanger human health and welfare, and whether these should therefore be subject to regulations under the Clean Air Act.

ICAO is currently developing a framework that would provide guidelines for implementation of regional MBMs. However, such a framework could only account for a limited number of emissions (i.e. that occurring in the sovereign airspace), estimated to be up to 22% of sector total (Lee et al., 2009). The global MBM scheme for international aviation under development would replace regional approaches like the EU Emissions Trading Scheme (ETS) and capture a greater share of global aviation emissions; however, if ICAO cannot come to an agreement on global measures to limit aviation emissions scheme, regional actions may proceed within the EU and the US.

In addition to efforts toward a global CO_2 standard and MBMs for aircraft, progress on a policy for alternative fuels is still in the early stages, since ICAO is determining a methodology for measuring GHG reductions from alternative fuels. While alternative fuels are expected to contribute a portion of the potential reduction in global aviation GHGs, there remains significant uncertainty about the production potential and life cycle emissions of alternative fuels to 2050.

Table 11 summarizes and compares the timelines for regulatory developments of aviation GHGs within ICAO, the EU, and the US. These developments include the establishment of regulatory authority, invitations to develop regulations, milestones toward adoption, and changes in implementation.

Table 11. Timeline of regulatory developments for aviation GHGs in ICAO, EU, and US

Year	ICAO	EU	US
1997	Kyoto Protocol assigns ICAO responsibility to reduce aviation emissions		
2001	ICAO endorses an open emissions trading system for international aviation, rules out		

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	possibility of aircraft GHG standards		
2002		European Parliament and Council direct the European Commission to propose aviation emission reductions if ICAO does not proceed	
2004	ICAO rules out an aviation-specific global emissions trading system, favoring inclusion of international aviation into national emissions trading schemes		
2005		EU ETS launched as the world's first international company-level "cap-and-trade" system for reducing CO2 emissions European Council concludes that international aviation is to be included in the EU emissions trading system (ETS)	
2007			US environmental groups represented by Earthjustice petition the EPA to regulate US aviation emissions
2008		EU includes international aviation in its ETS, to take effect in 2012	EPA issues advanced notice of proposed rulemaking (ANPR) for regulating GHGs under the Clean Air Act (CAA)
2009	ICAO begins scoping out a CO2 standard for aircraft		
2010	ICAO adopts goals for global 2% annual average fuel efficiency improvement until 2020, and from 2021 to 2050; cap international aviation CO_2 at 2020 levels ICAO requests development of a CO_2 standard for new aircraft and the development of a framework for market based measures (MBMs), and decides to explore a global MBM scheme for international aviation		US environmental groups file a lawsuit against the US EPA for delaying regulation of non-road GHGs
2011		ICAO Council adopts a (Delhi) Joint Declaration opposing the EU's plan to include international flights by all carriers registered in non-EU Member States in its EU ETS	Court rules EPA must address non-road emissions under CAA; EPA promises an endangerment finding for aviation emissions
2012	ICAO agrees on a CO_2 metric system	Aviation activity included in the EU ETS starting 1 January 2012 23 countries meet and adopt Moscow Joint Declaration opposing EU ETS inclusion of international aviation, and urge EU Member States to work within ICAO on a multilateral approach to address international aviation emissions	

		EU agrees to delay inclusion of international aviation in its ETS, allowing ICAO to agree on meaningful international action by the ICAO Assembly in 2013	
2013	ICAO finalizes a CO_2 certification procedure for new aircraft ICAO agrees to develop a global MBM for international aviation		
2014		EU informally agrees to exclude international aviation from its ETS until 2017	

3.6. Public health impacts of light- and heavy-duty vehicles

The regulatory approaches for vehicle emissions and fuel quality developed in the US and Europe provide a pathway that other countries can follow to improve the environmental performance of their vehicle fleets. Regulations for LDVs in Europe progress from Euro 1 to Euro 6 using Arabic numerals, and in the US include Tier 1, Tier 2, and Tier 3 – the most recent of which sets the most stringent emission limits of any LDV regulation in the world. HDV regulations in Europe progress from Euro I to Euro VI using Roman numerals, and in the US include EPA 2004, 2007, and 2010 standards. Regulations for LDVs require new vehicles to meet emission limits based on distance traveled, while those for HDVs tend to limit new vehicle emissions based on engine work done. Both such standards tend to apply first to all new type approvals, followed by application to all new sales and registrations up to a year or so later. The timelines in this report refer to standards by the date of application to all new sales and registrations. The impact of these standards on fleetwide emissions depends on the rate of fleet turnover, which averages significantly longer for HDVs than for LDVs.

In the US, EU and Japan, vehicle emissions regulations have accelerated the commercialization of advanced emission control technologies. Because many of these technologies require cleaner fuels to function optimally, vehicle regulations have been paired with fuel quality regulations that allow the proper function of emission controls as well as reduce emissions from the legacy fleet. Such regulations have proven to be a highly cost-effective means of controlling vehicle emissions, with the most recent Tier 3 LDV regulations in the US yielding 4.5 to 13 dollars of benefits for every dollar spent on cleaner vehicles and fuel (EPA, 2014). Today, the technologies for clean vehicles and fuels necessary to meet the latest regulations in the US, Europe, and Japan are commercially available and can be transferred to other countries that adopt such regulations.

Context

To date, most countries follow the progression of European standards, which have been adopted by the World Forum for Harmonization of Vehicle Regulations for the United Nations Economic Commission for Europe (UNECE, 2012). Notable exceptions include the US, Canada,

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Mexico and Japan. There remains considerable variation in progress toward clean vehicles and fuels even among the top vehicle markets, and especially in rapidly growing smaller markets in the Asia-Pacific, Africa, Latin America, and the Middle East, with countries implementing standards anywhere from a few years to several decades after such regulations in the US and Europe.

Figure 14 compares historical and future implementation dates for nationwideemission standards among the top vehicle markets. Since the lag between adoption and application to all sales and registrations can run four or more years, some regulations provide incentives for early compliance or phase in over several years. For example, the US Tier 3 standards – which have emission limits up to 80% lower than current Tier 2 standards – will phase-in from 2017 to 2025 to allow manufacturers lead time to develop new emission control technologies.

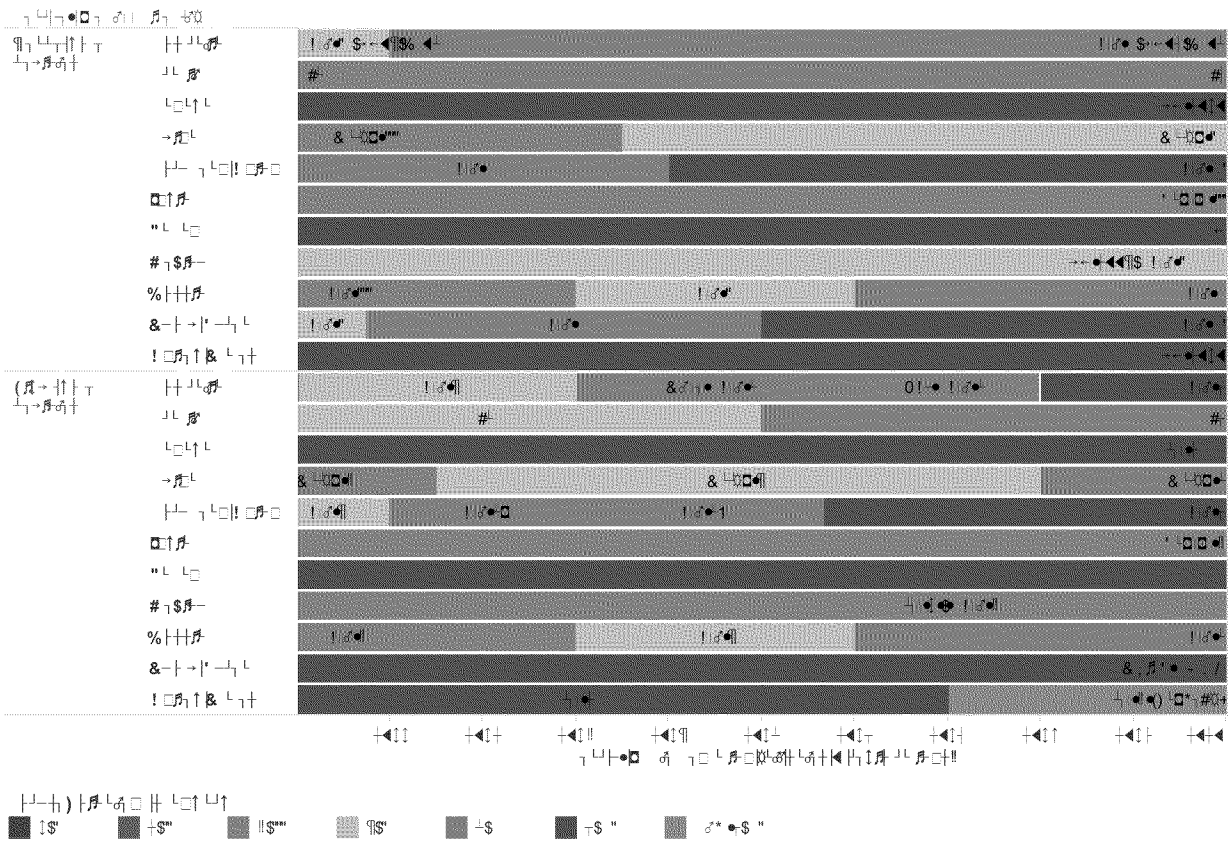


Figure 14. Light- and heavy-duty vehicle emission standards in selected regions*

** Includes eleven of the top vehicle markets (Australia, Brazil, Canada, China, EU, India, Japan, Korea, Mexico, Russia, and the US) Australia's 'Core' Euro 5 adopts the technical requirements of ECE R83/06, except that it does not require the new, PMP -based testing methods for PM mass and has no PN limit. Some other requirements are also relaxed, including the OBD threshold. Japan's PNLTES stands for 'Post New Long Term Emission Standards'.*

Outlook and projections

To date, adopted emission standards for LDVs and HDVs have yielded tremendous benefits. Figure 15 compares the estimated number of premature deaths in the selected vehicle markets

from exposure to exhaust PM under currently adopted policies and with accelerated adoption of international best practices. Similarly, Figure 16 compares projected changes in NO_x relative to 2010. Looking forward, adopted standards are projected to significantly reduce the health impacts PM emissions; however, these gains could be counteracted by growth in vehicle activity without the implementation of standards equivalent to Euro 6/VI or better. Advancing to such standards in all 11 markets could avoid on the order of 90,000 premature deaths caused by vehicle emissions in 2030, and cut emissions of NO_x by 80% from 2010 levels. The impacts of standards on PM and NO_x emissions are broken down by region in Table 12. More in-depth analysis of the impact of vehicle emissions and fuel quality standards on on-road emissions and health impacts can be found in the ICCT's global health roadmap report (Chambliss et al, 2013).

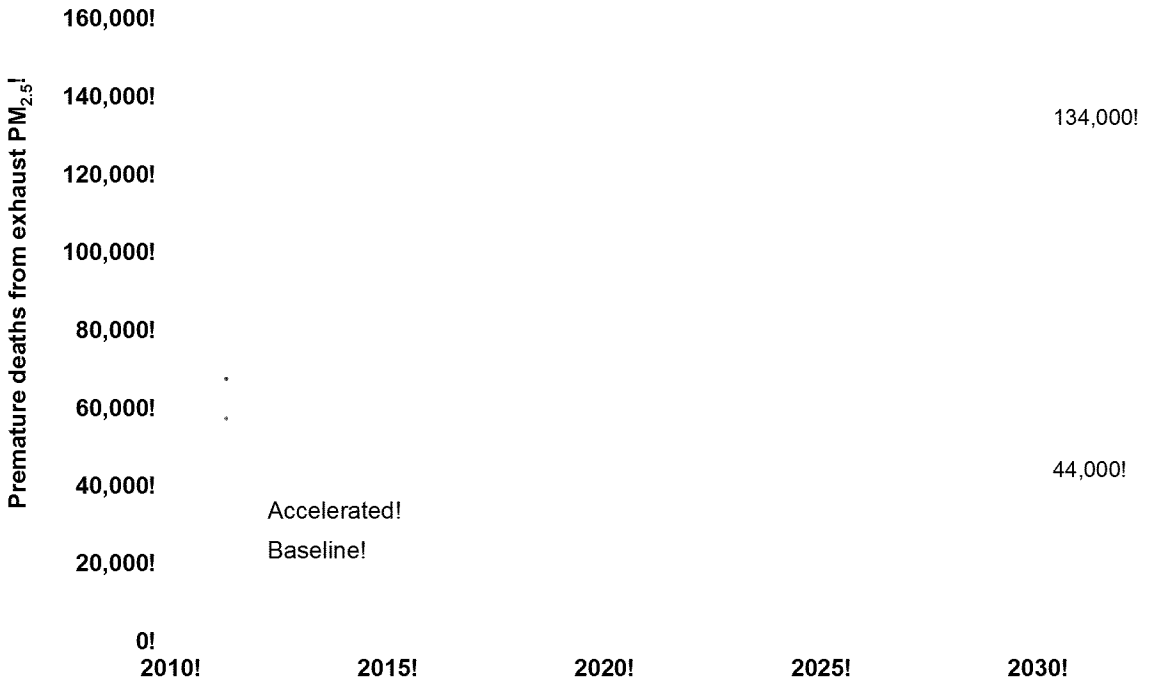


Figure 15. Premature mortalities from light- and heavy-duty vehicle exhaust $PM_{2.5}$ in selected regions*

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Figure 16. Trends in light- and heavy-duty vehicle exhaust NO_x in selected regions*

*Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014). **Adopted** = currently adopted policies. **Accelerated** = all countries implement Euro 6/VI; some countries move to next-generation standards (Chambliss et al., 2013). Includes eleven of the top vehicle markets (Australia, Brazil, Canada, China, EU, India, Japan, Korea, Mexico, Russia, and the US)*

Box 5. Health impacts from on-road vehicles

This report includes estimates of premature mortality from exposure to exhaust emissions of $PM_{2.5}$ in urban areas, and is not intended to capture the full burden of health impacts from the transport sector. Intake fractions are used to convert exhaust $PM_{2.5}$ emissions to urban concentrations. Intake fractions, which vary by geography, meteorology, and population size, represent the share of total emissions that are inhaled. This health assessment method offers unique advantages: (1) it utilizes previously developed global health, demographic, and intake fraction datasets that permit consistent application and comparison across regions; (2) it provides rapid estimates of health impacts that do not require resource-intensive global chemical dispersion modeling; and (3) it does not rely on detailed modeling of emissions from other sectors, enabling the analysis to focus on the transport sector. A more comprehensive description of this methodology is described in Chamblisset al. (2013).

Table 12. Percent change in light- and heavy-duty vehicle exhaust NO_x and $PM_{2.5}$ emissions from 2010 to 2030

	Percent change in NO_x		Percent change in $PM_{2.5}$	
Region	Adopted	Accelerated	Adopted	Accelerated
Australia	-35%	-68%	-26%	-37%
Brazil	-28%	-69%	-50%	-84%
Canada	-21%	-29%	-14%	-14%
China	41%	-48%	-55%	-68%

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EU-28	-45%	-53%	-75%	-75%
India	180%	-4%	150%	-12%
Japan	-66%	-70%	-75%	-75%
Mexico	57%	-46%	46%	-76%
Russia	-22%	-48%	-31%	-37%
South Korea	-57%	-66%	-59%	-64%
US	-15%	-22%	-15%	-15%

Increase >100% | Increase 1-100% | -1% to -20% | -21% to -50% | -50% to -75% | Decrease > 75%

*Estimated using ICCT's Global Transportation Roadmap model (**ICCT, 2014**). **Adopted** = currently adopted policies. **Accelerated** = all countries implement Euro 6/VI; some countries move to next-generation standards (Chambliss et al., 2013).*

3.7. Sulfur content of gasoline and diesel on-road fuels

Reducing the sulfur content of diesel and gasoline is key to enabling the introduction of advanced vehicle emission controls to meet post-Euro 2/II regulations. Sulfur content of fuel is also directly tied to the production of sulfates, which contribute to PM emissions. Regulations for diesel vehicles require reductions in fuel sulfur content for optimal function and durability: these include 500 ppm for exhaust gas recirculation (EGR), 50 ppm for selective catalytic reduction (SCR) and diesel oxidation catalysts (DOC), and 15 ppm for NO_x adsorbers and diesel particulate filters (DPF) (Blumberg et al., 2003); while technical capabilities are slightly different than regulatory requirements, lower sulfur levels generally result in lower tailpipe emissions. Similarly, gasoline vehicles are recommended to operate using fuel with fewer than 50 ppm sulfur for three-way catalysts (TWC), 30 ppm for advanced TWCs, and 15 ppm for NO_x traps for full function of emissions controls (Blumberg et al., 2003).

Context

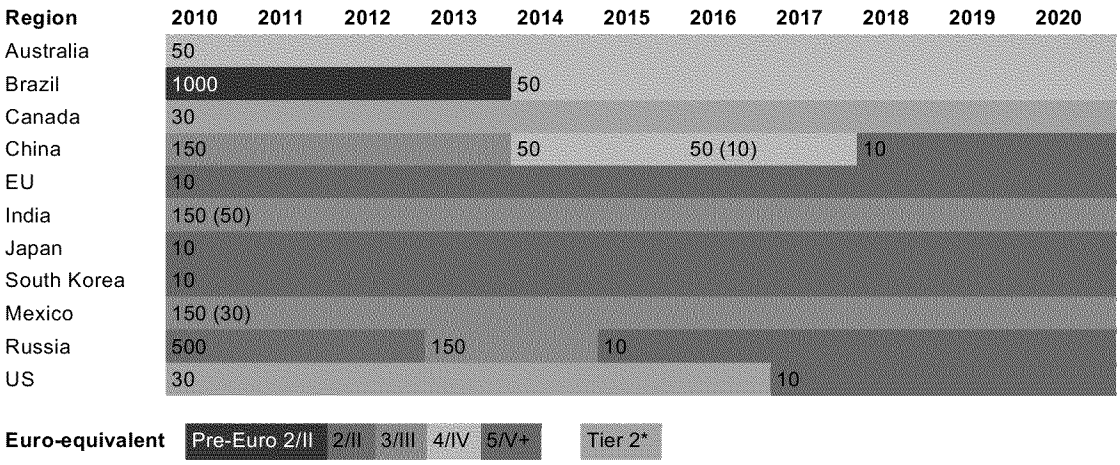
Limiting the sulfur content of on-road gasoline and diesel to a maximum of 10 to 15 ppm (ultralow-sulfur) is an essential component of best-practice vehicle emissions control programs in both fuel-importing and fuel-producing countries. Such improvements yield immediate emission benefits from the existing vehicle fleet and enable the progression of emission standards. In countries without domestic vehicle production, improving fuel quality can enable the proper function of emission controls on imported vehicles that would otherwise malfunction with lower-quality fuel. In addition to regulatory requirements, fuel-importing countries and local governments can incentivize cleaner fuels with differential taxation; fuel-producing countries can either invest directly in refinery upgrades or offer refiners subsidies or tax breaks to produce cleaner fuels. To date, six of the selected markets have established pathways toultralow-sulfur gasoline, while eight have done so for ultralow-sulfur diesel.

The following timelines for adoption of gasoline and diesel sulfur limits highlight the wide variation among countries regarding current nationwide sulfur limits for on-road gasoline and diesel. In many countries such as Brazil, China, and India, lower sulfur fuels are available in

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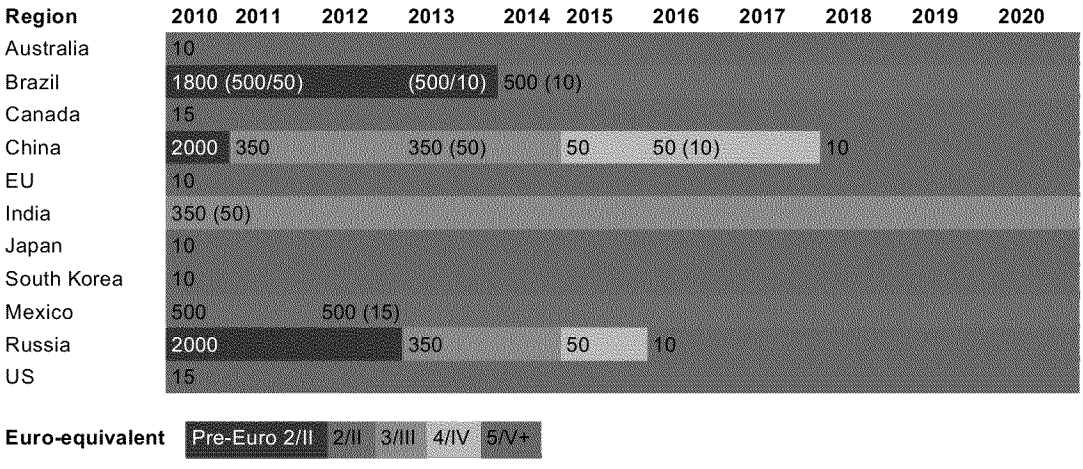
major metropolitan areas or select provinces, while higher sulfur fuels are sold in other areas of the country.

Table 13. Timeline for adopted nationwide gasoline sulfur limits (parts per million)



**US Tier 2 requires 30-ppm average; EU requires caps*

Table 14. Timeline for adopted nationwide diesel sulfur limits (parts per million)



3.8. Air pollutant emissions of international marine vessels

Conventional pollutants from international marine vessels are regulated by the IMO's MEPC under Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL). While GHG discussions within the IMO have focused primarily on CO_2, BC is a potent short-lived climate pollutant in addition to its adverse health effects. SO_x and NO_x are targets for emission reduction primarily based on their adverse air quality impacts. While a portion of shipping emissions occur far out at sea, 70-80% of SO_x, NO_x, and BC are emitted from ships traveling within 400 km of a coastline, close enough to have significant impacts on

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human health (Wang, 2013a). For all three pollutants, proven technologies and fuels exist that are capable of reducing emissions by over 90% from uncontrolled levels (ICCT, 2013).

Context

Reducing the sulfur content of fuel has a direct impact on SO_x emissions, and the MEPC has made low-sulfur marine fuel a core component of its strategy to limit air pollution from shipping. Figure 17 shows the timeline for fuel sulfur requirements adopted by the IMO. Since 2000, the IMO has capped marine fuel sulfur at 4.5% (45,000 ppm) globally, and in 2012, it tightened this limit to 3.5%. Ships are required to switch to lower sulfur fuel (1%) when operating within designated Emission Control Areas (ECAs); as of 2014, these include the North Sea, Baltic Sea, North American, and Caribbean. Starting in 2015, the fuel sulfur limit within existing ECAs will tighten to 0.1% (still a factor of 100 higher than ultralow-sulfur on-road fuel), and in 2020 the global limit for marine fuel sulfur is scheduled to decrease to 0.5%. A fuel availability review started in March 2014 and will determine if the 2020 implementation date will stand. Currently, a correspondence group of nations has been convened, headed by the US to discuss the issue and provide recommendations by 2016.

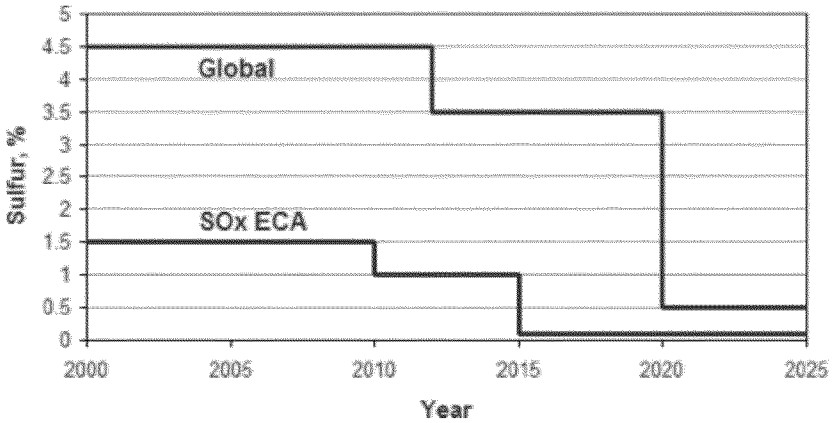


Figure 17. IMO low-sulfur fuel requirements, 2000-2025 (ICCT & DieselNet, 2014)

In coastal areas not protected by an ECA, local governments have taken fiscal and regulatory actions to encourage ships to switch to lower sulfur fuel when entering a port area (Wang, 2013b). Such local actions have significant potential to improve regional air quality and augment the benefits of international action (Wang, 2013a).

Similar to emission standards for HDVs, MEPC has limited NO_x emissions from new ships globally at Tier I levels since 2000, and Tier II since 2011. As shown in Figure 18, the NO_x limits of adopted Tier I and Tier II programs will be significantly tightened with the newest Tier III standards, which will apply to ships traveling within ECAs. Prior to the MEPC meeting in 2013 (MEPC-65), amendments to Annex VI were slated to require new build ships to meet Tier III standards when operating within ECAs starting in 2016. This 2016 application date would apply to any future NO_x control areas, creating consistency in technology application requirements. At MEPC-65 following the report of the correspondence group tasked with determining the

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feasibility of the NO_x Tier III implementation date, the Russian Federation raised objections to 2016 citing an inability of current technologies to reach the required NO_x reductions in safe, economical ways. Several countries and industry groups submitted papers supporting current technologies, specifically Selective Catalytic Reduction (SCR), to meet the NO_x Tier III requirements and urging members to uphold the 2016 implementation date for existing ECAs (Azzara et al., 2014). After deliberation, NO_x Tier III for the North American ECA in 2016 was upheld with a compromise on new ECAs reached (Rutherford, 2014). For new ECAs, the emission control requirement for new vessels will come into effect only after the ECA application has been approved by the MEPC.

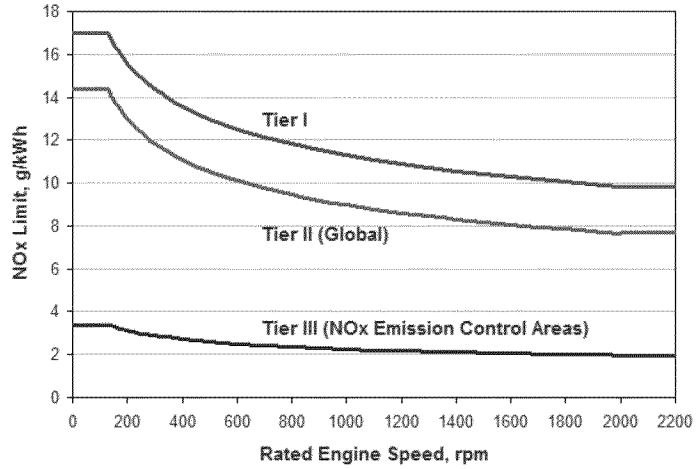


Figure 18. IMO Tier I, Tier II, and Tier III NO_x requirements (ICCT & DieselNet, 2014)

In addition to their impact on human health, black carbon emissions from international shipping are accelerating the pace of climate change, especially in the Arctic region due to the melting impacts of black carbon on ice and snow (Azzara, 2014). In 2010, the IMO committed to take action to reduce marine BC specifically in the Arctic: "The Committee agreed that ship's emissions of black carbon and other particulate matter affecting the Arctic region needed to be addressed specifically as an integral part of the Organization's work on prevention of air pollution from ships and its contribution to combat climate change and global warming " (MEPC 60/22). In 2011, the MEPC created a correspondence group with the mission to 1) define black carbon, 2) recommend methods to measure black carbon emissions from vessels, and 3) identify technologies to reduce emissions. The first two components have suffered considerable delay due to a lack of consensus on the specific definition of BC and an appropriate mechanism to measure emissions. Until the issues of definition and measurement are resolved, the conversation cannot progress to mitigation technology – nor can the issue of black carbon emissions be taken up by other subcommittees, for example, Ship Design and Construction, which is tasked with developing the Polar Code for safety and environmental protection in the Arctic (Azzara, 2014). Two possible definitions of black carbon, each associated with one or more means of measurement, will be considered by IMO at the MEPC 67 meeting in October 2014.

Outlook and projections

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The effects of adopted IMO regulations are expected to vary by pollutant over the next fifteen years. Based on ICCT modeling, and as shown in Figure 19, emissions of NO_x, SO_x, and PM_{10} from shipping would have increased by factors ranging from 1.7 to 3.4 from 2007 to 2030 without policy action. Under adopted IMO regulations, NO_x emissions are still forecast to increase, albeit less quickly as a resu lt of Tier III regulations. Low -sulfur fuel regulations are forecast to reduce emissions of SO_x and PM to 60% and 40% below 2007 levels by 2030, respectively, despite rapid growth in shipping activity.

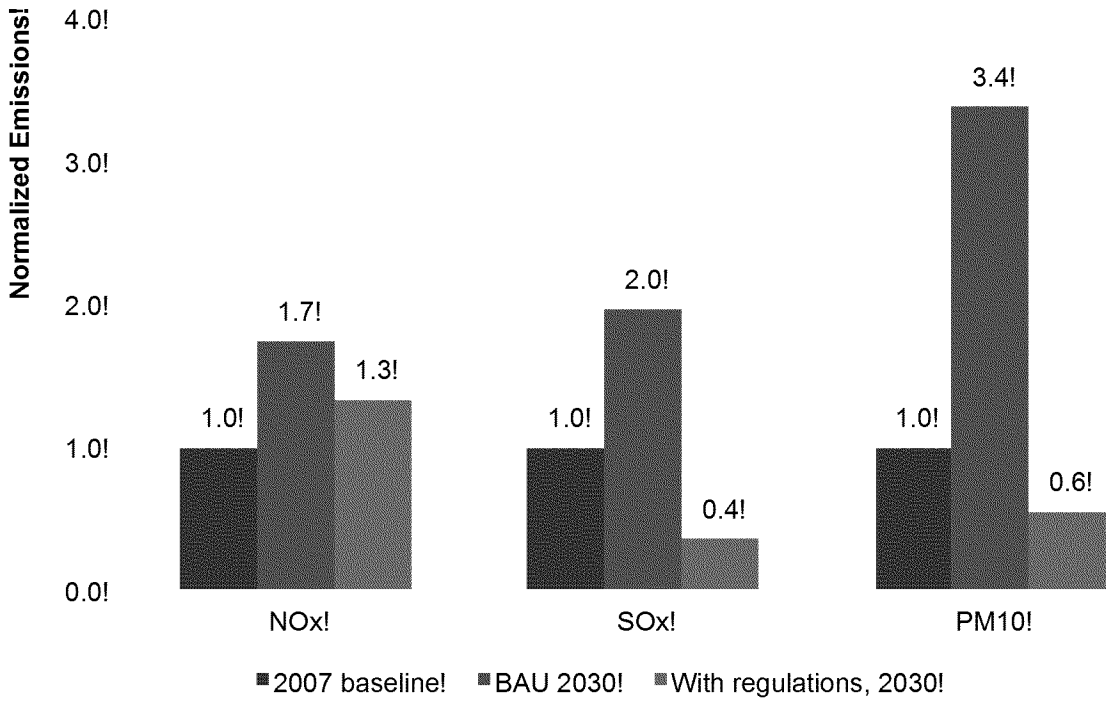


Figure 19. Trends in global marine emissions, 2007-2030

Table 15 provides additional background regarding regulatory developments within th e IMO for low-sulfur fuel, NO_x emission standards, and BC emission reductions. These developments cover establishment of regulatory authority, formal calls to regulate harmful pollutants, major technical studies, adoption, and implementation of policies. Established implementation dates are also included beyond 2014.

Table 15. Timeline of regulatory developments for marine pollutants within the IMO

Year	Low-sulfur fuel	NOx emission standards	Black Carbon (BC)
1997		1997 protocol to MARPOL, including Annex IV, agreed upon at IMO	
2000	1.5% sulfur limit in SOx ECA; 4.5% global sulfur limit	Tier I (retroactive to new engines installed on vessels after Jan 1, 2000)	
2004		Annex VI was ratified	
2005	Baltic Sea SOx ECA entered	Annex VI entered into force	

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	into force		
2006	North Sea SOx ECA entered into force		
2008	IMO adopted amendments for fuel standards beginning in 2010	IMO adopted amendments for Tier II & III NOx standards along with Tier I NOx requirements for pre-2000 engines (known as the 2008 amendments)	
2009			Arctic Council identifies BC as of particular concern due to effects on snow and sea ice
2010	North American SOx ECA adopted	2008 Amendments enter into force	
2011	Caribbean SOx ECA adopted	Tier II implementation	MEPC BLG subcommittee begins work to define, measure, identify control options of BC
2012	ECA 1% sulfur; 3.5% global sulfur limit	IMO NOx technology correspondence group undertook technology feasibility study	Report submitted to IMO on BC mitigation technologies
2013		Russian Proposal to push implementation date to 2021	US acknowledges potential for unintended consequences of arctic BC on climate trends
2014	US Caribbean ECA comes into force	Compromise on implementation: US ECA 2016; future ECAs to be determined by date of application approval	PPR-1 IMO subcommittee meeting held. During the meeting a BC working group was established.
2015	ECA 0.1% sulfur		
2016	IMO expected to complete fuel availability study	North American ECA Tier III	
2020	Global 0.5% sulfur		
2025	Alternate 0.5% pending study results		

3.9. International aviation emissions

ICAO has developed, or is currently developing, several policy instruments to control aviation emissions, including aircraft NO_x emission standards, and most recently a new certification requirement for PM emissions from aircraft engines that will serve as the basis for a future standard. ICAO has also developed standards for noise control at airports, but those are beyond the scope of this report.

NO_x Emission Standards

In response to concerns about local air quality in the vicinity of airports, in 1981 ICAO adopted engine certification standards for NO_x, CO, unburned HC, smoke, and liquid fuel venting based on the Landing Take-Off (LTO) cycle below 3,000 feet altitude (REFERENCE). Known as the

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CAEP/1 (first meeting of the Committee on Aviation Environmental Protection) NO_x standard, this applied to newly manufactured engines beginning in 1986. In the following decade, ICAO adopted increasingly stringent NO_x standards in an effort to constrain emissions growth (parenthesis denote year of adoption):

- CAEP/2 NO_x (1993): Reduced emission limits by 20% for newly certified engines starting in 1996 and for already -certified newly manufactured engines starting in 2000;
- CAEP/4 NO_x (1999): Required additional 16% reductions relative to CAEP/2 standard beginning in 2004;
- CAEP/6 NO_x (2005): Required additional 12% reduction from CAEP/4 levels;
- CAEP/8 NO_x (2011): Mandated additional reductions of 5% to 15% for small engines and 15% for large engines certified starting in 2014 compared to the CAEP/6 standard. Also confirmed that all individual engines produced on or after 1 January 2013 must comply with CAEP/6 NO_x standard or face a production cutoff.

In addition to these standards, which are typically established as technology-following standards to prohibit backsliding from new engines, in 2010 ICAO established more aggressive but non-binding medium- and long-term NO_x technology goals equivalent to a 45% reduction of CAEP/6 for 2016 and 60% reduction of CAEP/6 for 2026 (REFERENCE).

Since ICAO has no formal enforcement authority, these standards are translated into national requirements under domestic legislature and implemented by national transportation or environmental authorities. For example, the US EPA adopted CAEP/2 NO_x standard to align its aircraft emissions standards with ICAO in 1997, and updated those standards in 2012 to take into account the CAEP/6 and CAEP/8 standards for engines depending upon their original type certification dates.

ICAO's NO_x standards are based upon an LTO test cycle and targeted towards improving air quality around airports. ICAO has chosen not to regulate cruise NO_x emissions, which contribute to global climate change, on the basis that LTO NO_x has a positive relationship to cruise NO_x emissions and so the existing LTO NO_x standards should correspondingly reduce in cruise NO_x (REFERENCE).

Particulate Matter Standard Development

In 2010, ICAO began the development of a non-volatile particulate matter (nvPM) standard, aimed at reducing the impacts of ultrafine particulate matter on air quality, human health, and global climate (REFERENCE). At CAEP/9 in 2013, CAEP agreed to develop, in conjunction with the SAE E-31 committee, a new emission certification requirement for turbofan/turbojet engines greater than 26.7 kN to measure and quantify nvPM emissions based upon both mass and number (ICAO, 2013). ICAO expects to adopt the first nvPM standard at the CAEP/10 meeting in February 2016. In addition, ICAO is considering a potential nvPM emission s standard for turbofans/turbojets less than 26.7 kN, including turboprops, helicopter turboshaft, and APU engines.

Aircraft Noise Standards

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Although noise is beyond the scope of this report, noise pollution is a serious environmental impact from aviation, and it was the first environmental issue addressed by ICAO with the implementation of the Stage 2 noise standard in 1972. Since then, ICAO's noise standard has been periodically updated, most recently at the CAEP/9 meeting in 2013 with the adoption of a new "Chapter 14" noise standard. To date, CAEP has followed the approach of establishing technology-following standards meant to ensure that new technologies, once developed, are deployed in a timely manner across the in-production fleet. This means that new aircraft types easily meet the standards, suggesting further room for improvement and near-term updates given sufficient environmental pressures.

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CHAPTER 4. CONCLUSIONS

This chapter summarizes major regulatory developmentsfrom 2013 through July 2014, and the current state of clean transport policies, synthesizing a number of high-level conclusions from the above sections. The scope of the paper has been to highlight clean vehicle and fuel policy developments in the selected vehicle markets, as well as international marine and aviation. In summarizing the report's work, this chapter also provides recommendations for future policy development.

Conclusion 1: There have been a considerable number of major regulatory developments in clean transport in 2013/2014

From January 2013 through July 2014, 15 major new policies were implemented, 9 new such policies were adopted, and there were 4 new regulatory proposals in 11 of the selected vehicle markets and for international marine and aviation(Table 15). Brazil, India, and Mexico adopted their first regulations to improve the efficiency of new light-duty vehicles (LDVs), while the EU approved and China proposed more stringent standards. The EU's standards make its CO_2 requirements the most stringent in the world by 2021. The regulation of HDV efficiency has lagged behind LDV regulations, with the US, Canada, and China just implementing their first HDV efficiency standards. Many regions implemented more stringent vehicle standards for local air pollutants, including China, the EU, Brazil, Russia, and South Korea. The US adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide. There has also been progress toward lower sulfur fuels in China, the US, and Brazil that lay the foundation for dramatically strengthened vehicle emissions regulations. In addition, the EU, US, and California have proposed several revisions to strengthen their low-carbon fuel policies. At the international level, two policies entered into force in 2013 that wi ll improve the efficiency of marine vessels: the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP).

Table 16. Number of developments from 2013 through July 2014 by policy type*

Policy Type	Implemented	Adopted	Proposed	Delayed
Light-duty efficiency	2	4	1	–
Heavy-duty efficiency	3	1	–	–
Light-duty emissions	2	1	–	–
Heavy-duty emissions	4	–	–	–
Gasoline fuel sulfur	1	2	–	–
Diesel fuel sulfur	1	1	–	–
Low carbon fuel	-	-	3	-

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International marine	2	–	–	1
International aviation	–	–	–	–
Total	**15**	**9**	**4**	**1**

** Includes 11 of the top vehicle markets (China, the US, the EU, Japan, Brazil, India, Russia, Canada, South KoreaAustralia, Mexico), and international marine and aviation*

Many countries implemented more stringent vehicle standards for local air pollutants, including the EU (Euro VI for HDVs), South Korea (Euro VI for HDVs), China (Euro IV-equivalent for HDVs), Brazil (Euro 5-equivalent for LDVs), and Russia (Euro 5 for LDVs and Euro V for HDVs). The US also adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide. There has also been progress toward higher quality fuels in China (nationwide 50-ppm diesel by the end of 2014, and 10-ppm gasoline and diesel by 2018), Brazil (nationwide 50-ppm gasoline and 500-ppm diesel by 2014; and 10-ppm diesel in major metropolitan regions and select stations nationwide to fuel Euro V-equivalent trucks), and the US (10-ppm gasoline by 2017) that lay the foundation for dramatically tighter vehicle emission regulations.

With the addition of policies that have been adopted from 2013 through July 2014 as described in this report, Table 17 summarizes the current state of adoption of clean fuel and vehicle policies. The 11 vehicle markets that are assessed here encompass 85% of the 2013 world vehicle market by sales. Nationwide ultralow-sulfur fuel standards (9 of 11 regions) and LDV efficiency standards (8 of 11) have been adopted in the majority of the selected vehicle markets, even if not yet implemented in all of them. The most stringent vehicle emission standards, those equivalent to Euro 6/VI standards (in 5 of 11 regions), and regulations that would increase HDV efficiency (4 of 11) have had more limited adoption to date. Only two regions have fuel standards that would require reduced fuel GHG intensity over time.

Table 17. Status of clean vehicle and fuel policies in the eleven top vehicle markets

	Percent of world vehicle sales 2013	Light-duty efficiency standards	Heavy-duty efficiency standards	Low-carbon fuel policies	Light-duty emission standards equivalent to Euro 6 or better	Heavy-duty emission standards equivalent to Euro VI	Ultralow-sulfur diesel standards (nationwide)
China	25%	X	X*				X*
US	19%	X	X	X	X	X	X
EU	17%	X		X	X	X	X
Japan	6%	X	X*		X	X	X
Brazil	4%	X**					X***
India	4%	X*					
Russia	3%						X*
Canada	2%	X	X		X	X	X

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South Korea	2%	X			X	X	X
Australia	1%				X		X
Mexico	1%	X*					X***
Other countries	15%						

"X" denotes adopted; "Efficiency standards" refer to fuel economy, fuel consumption, or carbon dioxide (CO_2) standards.
** Some adopted standards have not yet been fully implemented. These include LDV efficiency standards for India (2021) and Mexico (2016); HDV efficiency standards forChina (2015) and Japan (2015); ULSD for China (2018) and Russia (2016)*
*** Brazil's Inovar-Auto program offers fiscal incentives that are considered equivalent to a standard in this comparison.*
**** Mexico has adopted a nationwide ULSD standard but has not yet achieved full nationwide compliance. Brazil requires ULSD availability in select stations and metropolitan areas to supply Euro V-equivalent heavy-duty trucks operating nationwide.*

There has also been progress in international policy venues. Related to the international maritime industry, the EEDI and SEEMP, two policies that will improve the efficiency of marine vessels, entered into force in 2013. Despite the lack of regulatory action towards a final aviation policy, ICAO finalized a CO_2 certification procedure for new aircraft in 2013, a key step towards a global CO_2 standard.

4.1. Climate impacts and energy use

Conclusion 2: Efficiency standards now cover three out of four light-duty vehicles sold.

In a span of just ten years through 2014, the share of global LDV sales regulated for fuel consumption or carbon dioxide (CO_2) emissions increased from roughly 30% to over 75%. These regulatory standards are projected to reduce business-as-usual (BAU) energy consumption by 7.4 mbd in 2030, equivalent to 15 $GtCO_2$, including fuel combustion and upstream emissions. As a reference point, global transport CO_2 emissions were 8.8 $GtCO_2$ in 2010. However, efficiency standards for passenger vehicles have not been adopted in many emerging economies where vehicle sales will grow the fastest (e.g., in Asia-Pacific, Latin America, Middle East, and Africa). As a result, standards adopted thus far will be insufficient to offset the projected increase in vehicle activity and associated emissions.

> **Recommendation: extend and expand light-duty vehicle efficiency standards.** A key priority is to expand standards to the remaining 25 percent of vehicles in unregulated markets. In addition, existing efficiency standards would need to be extended and strengthened in currently regulated markets to keep pace with technological developments. Only the US (and Canada is expected to follow) has long-term standards with enough regulatory lead-time – through 2025 – to drive investments in the most advanced efficiency technologies. Otherwise, all existing and proposed standards, including the EU and China, have regulatory goals only through 2020 or 2021 (or earlier), with updates generally only set on 5-year intervals. Adoption of standards with a longer lead-time, at least through model year 2025, would give manufacturers more time to invest in research and development for advanced technologies and provide greater certainty of future regulatory requirements. This recommendation is most

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applicable to those nations that have established standards, including Europe, Mexico, Brazil, India, China, Japan and South Korea. The extension of LDV efficiency standards in current markets, and the expansion standards to new markets could essentially stabilize GHG emissions from the transport sector after 2020, and cut emissions by 0.95 $GtCO_2$ in 2030 compared to a scenario without those policies in place.

Recommendation: expand the electric-drive vehicle market.
As leading nations implement stringent low-emission and high-efficiency regulations in their LDV sectors, electric-drive vehicles are receiving increasing attention from industry, government, and media as a source of ultralow-emission passenger mobility. To the extent that electric-drive vehicles are powered by renewable electricity, they have a clear advantage over conventional internal combustion engines due to their higher efficiency and low carbon energy sources. Regulatory vehicle efficiency and GHG standards will encourage greater investment and deployment in more advanced efficiency and electric - drive vehicle technologies, especially as their costs decrease with research and development, and higher production volumes. Additional policies will complement regulatory standards, and numerous regions have already adopted tax exemptions, direct subsidies, and other non-fiscal incentives to encourage the sale of electric-drive vehicles. However, such vehicles still account for a small share of overall passenger car sales, representing about 6% in Norway, and less than 1% in most developed countries (Mock & Yang, 2014). Stronger measures are needed to accelerate the market adoption of electric-drive vehicles and capture the associated benefits of reduced CO_2 emissions and fuel consumption.

Conclusion 3: Progress in the adoption of HDV efficiency standards has been slow.

Despite substantial policy progress in the regulation of LDV efficiency and GHG emissions , there has been only limited progress in the development of HDV efficiency standards globally, despite the fact that HDVs represent more than 40% of on-road fuel consumption in most vehicle markets, and more than 50% in Brazil, China, and India (ICCT, 2014). To date, standards for HDVs have only been adopted in China, the US, Japan, and Canada. In many cases, data limitations, challenges to tackle a diverse sector with very diverse vehicles (e.g., long-distance heavy-duty trucks, interurban buses, garbage trucks), and insufficient industry engagement prevent more immediate progress in HDV efficiency standards. Because of increased demand for freight truck and bus transit activity, HDV emissions will continue to grow substantially and current estimates indicate that CO_2 emissions from the sector will grow nearly 60% by 2030 from 2010 levels (ICCT, 2014).

Recommendation: expand adoption of HDV efficiency standards.
The expanded adoption of HDV efficiency standards could have a substantial impact on the reduction of energy consumption and GHG emissions, stabilizing HDV emissions after 2025, and saving 0.59 $GtCO_2$ in 2030 when compared to a scenario without those policies in place. Voluntary “green freight” programs could also offer an important opportunity for early action while regulations for fuel efficiency of HDVs are being considered. In some cases, like in the EU, extensive data collection, laboratory

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investigation, and regulatory assessment can provide a sufficient foundation for mandated HDV efficiency standards. Mandated regulatory CO_2 reductions from HDVs in the EU could also be a critical step toward similar policies in markets around the world with similar HDV fleets that are following EU emission standards.

Conclusion 4: Despite efficiency regulations for new marine vessels, the marine and especially the aviation sector have been slow to adopt efficiency and GHG regulations.

Marine and aviation GHG emissions are either only partially included (i.e., domestic component only) or omitted entirely in national inventories. Primarily because so much of ship and aircraft emissions and fuel use are for journeys between countries, their impacts remain widely unacknowledged, and mitigation actions are perpetually de-prioritized. For the marine sector, new vessel efficiency standards have entered into force, and will reduce GHG emissions by 0.34 $GtCO_2$ in 2030 compared to a BAU scenario. However, a comprehensive policy requiring mandatory reductions in in-use fuel consumption remains under development, a critical undertaking since older and less efficient vessels can take four decades to retire. There are currently no proposed or adopted policies for a global CO_2 standard for new aircraft or a global market-based measure to constrain and offset emissions from the in-service fleet.

Recommendation: strengthen efficiency regulations for the marine sector and adopt regulations for aviation.

The potential to mitigate the in-use marine fleet's CO_2 emissions is among the most substantial of all policies discussed in this report, if appropriate international policy were to be adopted. Such policies, alongside strengthened standards for new vessels, could save 0.25 $GtCO_2$ in 2030 compared to a scenario with EEDI in place. Similarly, efforts by ICAO to develop both a CO_2 standard for new aircraft and a global MBM framework for the in-service fleet by 2016 could be among the most significant actions to reduce CO_2 emissions and fuel consumption from transport in the long run.

Conclusion 5: Leading low-carbon fuel policies are still in development

Many countries have now established targets for increased biofuel deployment for future years. The EU, US, and California policies have gone further, moving toward greater rigor, analysis of more fuel pathways, and comprehensive lifecycle accounting of land use effects to better differentiate the sustainable fuels that are reliably low carbon. These three leading governments are still actively developing their policies, with key challenges related to how they promote various biofuel, fossil fuel, and electric-drive fuel sources. The EU and California regulatory standards would reduce average fuel carbon intensity by approximately 6% in the 2020 timeframe.

Recommendation: Promote low-carbon, deter high-carbon fuels

To establish more robust longer-term fuel carbon policy, countries should shift from generic biofuel targets to policies that promote fuels with reliably low lifecycle carbon, low indirect land use, and minimal food system interaction. Recent EU-based findings indicate that up to 16% of road transport fuel could be derived from waste-based

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sources by 2030. In addition, fuel policy that disincentivizes the use of high-carbon fossil fuels (e.g., oil sands, high-upstream leakage natural gas) is lacking, with the possible exception of California. Over the long-term, developing these fuel policies to especially promote de-carbonized electricity (and hydrogen) for a growing number of electric-drive vehicles, will be a key climate stabilization goal for transport.

Conclusion 6: The transport sector has shown much progress in adopting climate mitigation policies to date, and further cost-effective low-carbon technologies remain.

Vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Actions toward international marine vessel efficiency have also proven the potential effectiveness of international fora when they have a sectoral focus and a strong business case. Yet many cost-effective opportunities remain to reduce transport sector CO_2 emissions and accrue fuel savings that offset technology costs. Such opportunities exist to extend existing policies (e.g., through 2025), adopt similar policies in emerging vehicle markets, expand progress to other transport modes (e.g., HDVs, marine, aviation), and shift to alternative low-carbon fuels.

Penetration of cost-effective vehicle, marine, and aviation efficiency technologies and low-carbon fuels into all major vehicle markets could have dramatic effects on global CO_2 emissions and petroleum use from transport. Figure 19 summarizes the full effects of adopted and potential vehicle and fuel regulations on global CO_2 emissions from the transport sector. Regulations adopted to date will reduce lifecycle CO_2 emissions by 2.2 $GtCO_2$ from BAU levels in 2030, equivalent to approximately 11 mbd not used. Additional reductions from the expansion of best-practice policies can essentially stabilize global CO_2 emissions after 2020, even with continued growth in the demand for passenger and freight transport.

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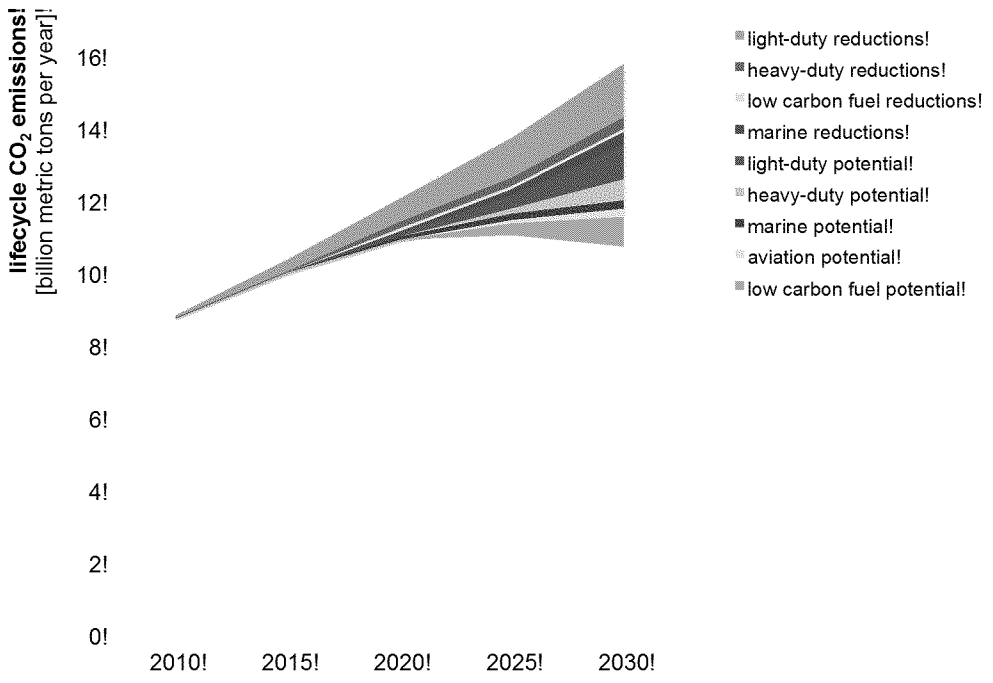


Figure 20. Global CO_2 emissions from transport, 2010–2030

The adopted policy actions and the potential for additional transport-sector policies to mitigate GHG emissions are substantial. However, global policies that have been adopted to date are not nearly sufficient to constrain temperature increases to two degrees Celsius and avoid catastrophic climate change (IPCC, 2014). Future research should include a comparison of the impacts of adopted and potential climate mitigation actions across the economic sectors (e.g., transport, electric power, industrial, forestry) toward achieving global climate targets.

Based on the recent transport sector success, vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Yet many cost-effective opportunities remain to reduce carbon emissions and accrue fuel savings that offset technology costs. The transport sector has policy opportunities to extend the existing policies (e.g., through 2025), adopt similar policies in emerging vehicle markets, expand progress to other transport modes (e.g., HDVs, marine, aviation, off-road), and shift to alternative low-carbon fuels. However, we note that far greater research is needed to better understand where the most feasible and cost-effective energy and GHG mitigation actions are, across transport and the other sectors.

4.2. Air pollutant emissions and public health

Conclusion 7: Two out of three new vehicles lack world-class emission controls.

World-class vehicle standards for local air pollutants require state-of-the-art emission control technologies for pollutants with strong adverse health impacts such as PM and NO_x. A prominent benchmark is to achieve Euro 6/VI emission levels, at which exhaust emissions of PM and NO_x are reduced by over 97% from unregulated levels. Such standards apply to all sales and registrations in the US, Japan, and Canada, and to type approvals in the EU and South Korea. No other vehicle markets have yet proposed or adopted equivalent standards, and many medium-sized vehicle markets in Asia-Pacific, Middle East, Latin America, and Africaare several steps behind these world-class standards. In particular, a lack of regulations to ensure low-sulfur fuel supply remains a fundamental inhibitor to advancing vehicle emission regulations. The result will be increasingly severe public health impacts from transport until requirements for low-sulfur fuel and vehicle emissions controls are harmonized with the world-class standards adopted in most developed regions.

The lack of strong controls on vehicle emissions in emerging and developing regions is increasingly more critical as vehicle sales grow very rapidly. The share of light- and heavy-duty vehicle sales subject to Euro 6/VI-equivalent standards is increasing, from roughly one in four globally in 2010 to an estimated one in three in 2015. Nevertheless, much of the growth in vehicle sales is occurring in countries that have yet to ado pt such standards. Figure 20 shows trends in total vehicle sales by region from 2005 to 2013, as well as the annualized change in sales over this period.

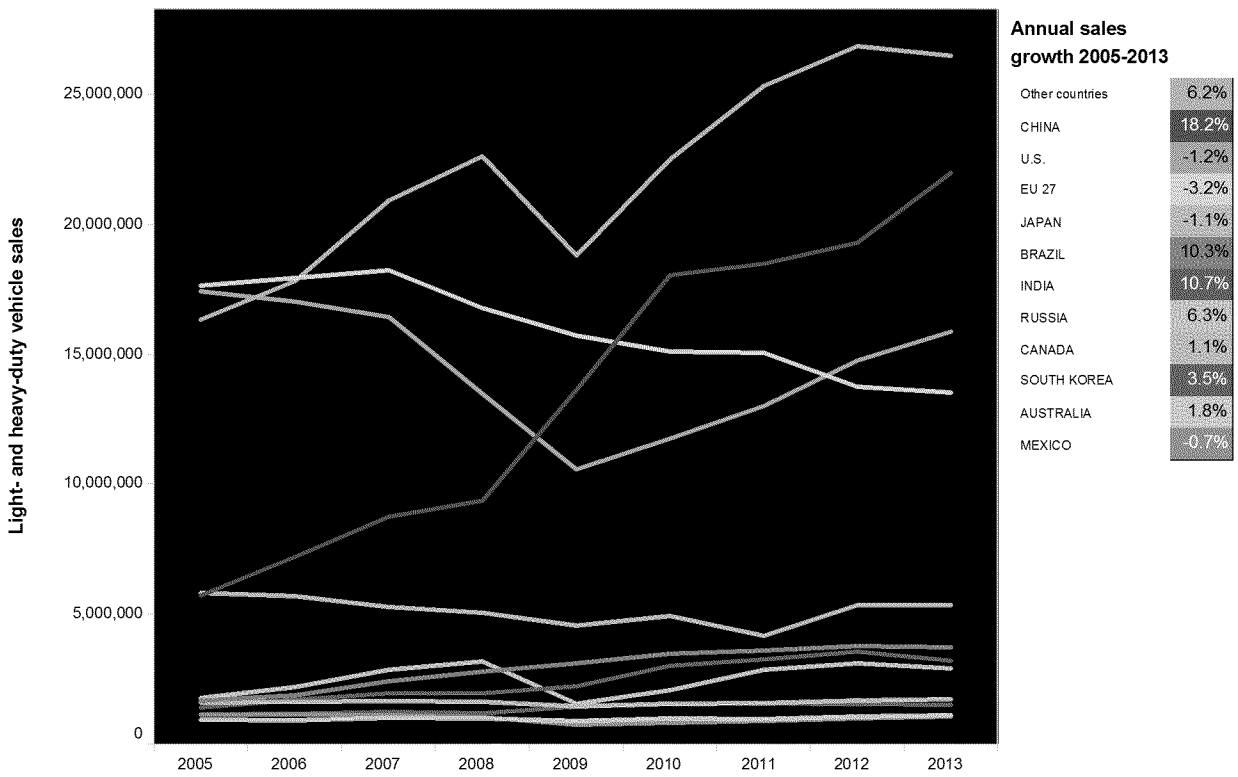


Figure 21. Sales of light- and heavy-duty vehicles, 2005-2013

Note that three of the four top vehicle markets, the US, EU, and Japan, had lower sales in 2013 than in 2005, meaning that there are fewer – and cleaner – vehicles entering the roads in these regions each year. Conversely, none of the fastest growing major vehicle markets – China, India, Brazil, and Russia – have set implementation dates for world-class emission standards (Euro 6/VI-equivalent or better). Moreover, other countries in Asia-Pacific, Latin America, Middle East, Africa, and post-Soviet states had greater combined sales in 2013 than China and India combined; most of these countries are several levels of emission control behind world-class standards. While several of the largest vehicle markets require state-of-the-art emission controls and others are considering harmonizing with existing standards, growth in urban transport activity will present an increasing public health risk unless emissions and fuel sulfur standards are brought up to date worldwide.

> **Recommendation: expand world-class vehicle and fuel standards to emerging and developing economies.**
> Because emerging and developing regions are experiencing rapid motorization and have not yet adopted world-class vehicle and fuel standards, they would strongly benefit from the adoption of world-class vehicle and fuel standards in terms of air quality improvements and public health benefits (see Conclusion 9).

Conclusion 8: Despite progress with current emission standards for international marine and aviation, future policy developments and timelines remain uncertain.

IMO is responsible for setting emission standards for international vessels, and has to date regulated emissions of NO_x and sulfur content of bunker fuels. Tier I levels for NO_x were introduced in 2000, and were since replaced by Tier II levels in 2011, with a reduction in emission rates of about 15%. Tier III levels, which will eventually apply to ECAs, will reduce emission rates of NO_x by roughly 80% from Tier I levels. Sulfur content is currently regulated at 3.5% (35,000 ppm), and is scheduled to be reduced to 0.5% in 2020. The regulation of BC to tackle both climate change and human health is pending technical discussions regarding the definition and measurement methods for BC. For ECAs, sulfur levels are currently set at 1%, and are scheduled to be reduced to 0.1% in 2015. ECAs are important because 70-80% of SO_x, NO_x, and BC are emitted from ships traveling within 400 km of a coastline, close enough to have significant impacts on human health (Wang, 2013a).

For international aviation, ICAO has developed multiple tiers of global aircraft NO_x emission standards, which are based on the landing take-off (LTO) cycle and target air quality improvements around airports. These global standards are then translated into national requirements under domestic legislature and implemented by national transportation or environmental authorities. The first global standard applied to engines manufactured in 1986, and by 2005 NO_x standards had reduced emission rates by roughly 40% over the levels established by the first standard. In addition, in 2011 ICAO mandated (CAEP/6) additional reductions of 5% to 15% for small engines and 15% for large engines certified starting in 2014 compared to the previous standard.

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Recommendation: strengthen existing standards and develop new standards for PM emissions for international marine and aviation.

For international marine, proven technologies and fuels can reduce emissions of PM_{10}, SO_x, and NO_x by over 90% from uncontrolled levels (ICCT, 2013). More-stringent standards to drive the adoption of these technologies and fuels could reduce global international marine emissions of NO_x by 24%, and PM_{10} and SO_x by roughly 80% in 2030 from BAU levels (i.e., without further policy action).

For aviation, in 2010 ICAO established more stringent but non-binding NO_x reduction targets equivalent to a 45% reduction of CAEP/6 by 2016 and a 60% reduction by 2026. These non-binding targets should be made mandatory. Also in 2010, ICAO began the development of a non-volatile particulate matter (nvPM) standard, aimed at reducing the impacts of ultrafine particulate matter on air quality, human health, and global climate. This first nvPM standard should be adopted by 2016, in line with ICAO's expectations.

Conclusion 9: Expanded adoption of standards requiring world class vehicle emission controls and low-sulfur fuel could avoid three out of four premature deaths from exposure to air pollution emitted by vehicles in 2030.

Figure 22 illustrates the effects of two policy pathways on the number of global premature deaths caused by exposure to vehicle emissions in the year 2030. These estimates are based on exhaust emissions of $PM_{2.5}$ from light- and heavy-duty on-road vehicles in urban areas and reflect the greatest impact of vehicle emissions on public health. Additional impacts include premature deaths direct PM emissions from off-road and marine diesel emissions, and exposure to secondary PM and ozone. Also absent from these health impact estimates are non-fatal health outcomes and lost productivity as a result of direct and indirect exposure to vehicle emissions. Without additional action beyond formally adopted regulations, the number of premature deaths from direct exposure to on-road vehicle emissions could grow by two-thirds in just 16 years. The vast majority of these impacts would occur in regions such as India, China, Brazil, Mexico, and countries in Asia-Pacific, Latin America, Middle East, and Africa. Expanding the adoption of Euro 6/VI-equivalent standards would avoid on the order of several hundred thousand premature deaths incurred from exposure to vehicle pollution each year by 2030. The benefits of these regulations will be especially impactful in major high-density cities.

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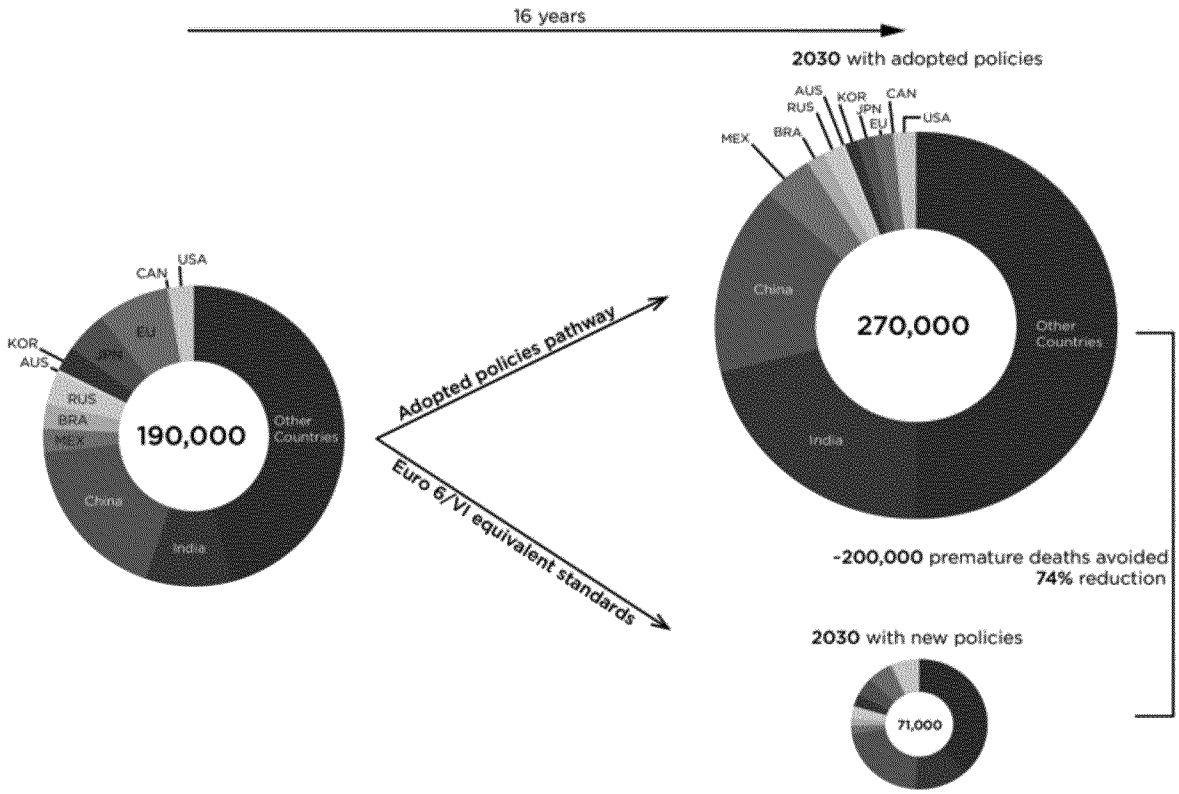


Figure 22. Global premature deaths from light- and heavy-duty vehicle exhaust $PM_{2.5}$

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LIST OF ACRONYMS

ANPR – advanced notice of proposed rulemaking
BAU – business as usual
BC – black carbon
BEV – battery electric vehicle
CAA – Clean Air Act (United States)
CAEP - Committee for Aviation Environmental Protection
CO_2 – carbon dioxide
DOC – diesel oxidation catalyst
DPF – diesel particulate filter
ECA – emission control area
EEDI – Energy Efficiency Design Index
EGR – exhaust gas recirculation
EPA – Environmental Protection Agency (United States)
ETS – Emissions trading scheme
EU – European Union
FCEV – fuel cell electric vehicle
FQD – Fuel Quality Directive
GFEI – Global Fuel Economy Initiative
GHG – greenhouse gas
$GtCO_2$ – billion metric tons of carbon dioxide
HDV – heavy-duty vehicle
ICAO – International Civil Aviation Organization
ICCT – International Council on Clean Transportation
IPCC – Intergovernmental Panel on Climate Change
IEA – International Energy Agency
IMO – International Maritime Organization
IPCC – Intergovernmental Panel on Climate Change
LCFS – Low Carbon Fuel Standard
LCV – light commercial vehicle
LDV – light-duty vehicle
LTO – landing take-off
mbd – million barrels of oil per day
MARPOL – International Convention for the Prevention of Pollution from Ships
MBM – market-based measure
MEPC – Marine Environment Protection Committee
MRV – monitoring, reporting, and verification
$MtCO_2$ – million metric tons of carbon dioxide
MY – model year
NO_x – oxides of nitrogen
OICA – International Organization of Motor Vehicle Manufacturers
PHEV – plug-in hybrid electric vehicle
PM – particulate matter

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$PM_{2.5}$ – particulate matter with an aerodynamic diameter less than 2.5 micrometers
PM_{10} – particulate matter with an aerodynamic diameter less than 10 micrometers
ppm – parts per million
RED – Renewable Energy Directive
RFS – Renewable Fuel Standard
SCR – selective catalytic reduction
SEEMP – Ship Energy Efficiency Management Plan
SO_x – oxides of sulfur
SUV - sport utility vehicle
TTW – tank to wheel
TWC – three-way catalyst
ULSD – ultralow-sulfur diesel, with <15-ppm sulfur content
UNECE – United Nations Economic Commission for Europe
US – United States
WHO – World Health Organization
WTT – well to tank
WTW – well to wheel

REGION / MODE	KEY POINTS
China	Proposed LDV Phase 4, but would likely need Phase 5 (2025) standards to meet GFEI target Implemented HDV Phase 2 efficiency standards; working on next phase of HDV standards (2020 and later) Renewed and enhanced subsidies for energy-efficient passenger vehicles Adopted pathway to nationwide ULSF in 2018 Began China IV, adopted China 5 (not yet V) Vehicle sales grew 18% annually between 2005 and 2013; now the largest vehicle market Would see a significant increase in health impacts without China 6/VI standards
US	Adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide Progress toward lower sulfur fuels Has adopted the longest regulatory timeline for LDV GHG standards out to 2025; 50% reduction 2005-2025, expected to achieve GFEI target 5 years early Implemented HDV GHG standards 2014-2018; began work on Phase 2 standards Successful implementation of the newest emission control area, the US Caribbean Sea ECA Retained 2016 implementation date for US ECA Revised biofuel volume requirements and established new eligible low-carbon fuel pathways in its Renewable Fuel Standard US EPA required to determine whether aircraft GHGs endanger human health and welfare
California	Proposed modifications to its Low Carbon Fuel Standard Among the highest in EV share of LDV sales (4% in 2013) ZEV mandate is perhaps the most significant electric-drive vehicle policy to date Requires in-use long-haul tractors and box-type trailers to retrofit or replace with aerodynamics, LRR tires
EU	Adopted 2020 CO_2 standards for cars and vans; would need 2025 standards to meet GFEI target Implemented Euro VI (all sales and registrations); Euro 6 to come into effect in September 2014 Mandated regulatory CO_2 reductions from HDVs could be a critical step toward similar policies in markets around the world that are following EU emission standards Proposed revisions for GHG accounting and added incentives for cellulosic biofuels in its Fuel Quality Directive, which would reduce road transport fuel carbon intensity 6% by 2020 Informally agreed to exclude international aviation from its ETS until 2017
Japan	Would need 2025 LDV standards to meet GFEI target Financial incentives for early compliance are in effect for HDV efficiency regulation
Brazil	Inovar-auto has begun implementation Would have to move relatively quickly to meet the GFEI target, likely with two phases of standards Implemented Euro 5-equivalent for LDVs Nationwide 50 ppm gasoline, 500 ppm diesel; 10 ppm diesel in metropolitan areas and select stations
India	Adopted the country's first passenger vehicle efficiency standards
Russia	No efficiency standards; would need several consecutive phases of standards to reach the GFEI target Began Euro 5 for LDVs and Euro V for HDVs (type approvals) Proposed to delay the implementation of Tier 3 NO_x standards to 2021; Tier 3 in future ECAs will be determined by the date of application approval
Canada	Could get close to the GFEI target by harmonizing with the US through 2025 Phase 1 HDV standards were adopted in March 2013 and applied starting with model year 2014 vehicles.
South Korea	Would have to move relatively quickly to meet the GFEI target, likely with two phases of standards Began Euro VI for HDVs (type approvals)
Australia	No efficiency standards; would need several consecutive phases of standards to reach the GFEI target
Mexico	Adopted country's first passenger vehicle efficiency standards through 2016 Could get close to the GFEI target by harmonizing with the US through 2025 Non-compliant with nationwide fuel sulfur regulations for gasoline and diesel
Aviation	No new regulations were proposed, adopted, or implemented in the study period New CO_2 certification requirement for new aircraft Revised “Chapter 14” noise standard for new aircraft which will take effect in 2017
Marine	EEDI entered into force in 2013, applying to all global ships over 400 gross tonnage US Caribbean Sea ECA became enforceable in January 2014 Russian proposal to delay the implementation of Tier 3 NO_x standards to 2021, IMO reached a compromise that upholds implementation in existing ECAs in 2016

The State of Clean Transport Policy

A 2014 synthesis of vehicle and fuel policy developments

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The International Council on Clean Transportation (ICCT) is a non-profit research organization dedicated to improving the environmental performance and efficiency of transportation to protect public health, the environment, and quality of life. The ICCT provides national and local policymakers with sound technical analysis of regulations, fiscal incentives, and other technology-based measures for clean vehicles and fuels. The ICCT works across modes including passenger cars, light commercial vehicles, heavy-duty trucks and buses, two- and three-wheelers, international aviation and marine, conducting global outreach with a focus on major and growing vehicle markets. The ICCT maintains a staff of about 40 technical and policy experts, and a network of council participants who provide input on regulatory and research priorities.

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EXECUTIVE SUMMARY

The transport sector has seen unparalleled global growth in the past several decades. As emerging economies grow, transport sector growth is expected to continue for decades to come. Transport activity trends have surpassed the growth in economic activities across industrial and energy sectors in most major economies. Along with the growth, we see greatly increased petroleum use, climate impacts, and local emissions. Driven largely by transport sector growth, world oil use is expected to surpass 100 million barrels of oil per day (mbd) in the 2020-2025 timeframe.

To address the growth in oil use and the associated impacts, the transport sector has begun to take the lead in developing and implementing policies for dramatically lower emissions and increased efficiency. This inaugural *State of Clean Transport Policy* report chronicles vehicle and fuel policy developments that are increasingly mitigating greenhouse gas (GHG) emissions and lowering air pollution from the transport sector. The report includes a novel synthesis of clean vehicle and fuel regulatory development from January 2013 through July 2014. It focuses on eleven of the top vehicle markets that accounted for 85% of global vehicle sales in 2013. The report includes up-to-date analyses of the relative contribution of clean vehicle and fuel policies to deliver reductions in air and climate pollutants, energy use, and benefits to public health.

This report covers national-level efficiency and exhaust emission standards for light - and heavy-duty vehicles, fuel sulfur standards, policies for low carbon fuels, and international regulations for marine vessels and aircraft. In addition, the work highlights areas where progress is lagging in the implementation of best-practice policies for clean transport. This report is not meant to provide a complete synthesis of all transport policy. Not included in this report are medium and smaller vehicle markets, locomotives, motorcycles, or off-road vehicles, even though we acknowledge their substantial contribution in certain markets. In addition, other policies that aim at reducing transport activity and shifting people and goods to more environmentally-friendly modes are beyond the scope of this work, but their critical role is critical to meet global climate targets.

Key high-level conclusions – and associated recommendations – about the state of clean transport policies and their impacts on climate, energy use, air pollution, and public health are summarized below.

Conclusion 1: There have been a considerable number of major regulatory developments in clean transport in 2013/2014.

From January 2013 through July 2014, major new policies were adopted or being newly implemented in the top vehicle markets. Brazil, India, and Mexico adopted their first regulations to improve the efficiency of new light-duty vehicles (LDVs), while the European Union (EU) approved and China proposed more stringent standards. The United States (US), Canada, and China also implemented their first heavy-duty vehicle (HDV) efficiency standards. Many regions implemented more stringent vehicle standards for local air pollutants, including China, the EU,

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Brazil, Russia, and South Korea. The US adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide. There has also been progress toward lower sulfur fuels in China, the US, and Brazil that lays the foundation for stronger vehicle emissions regulations. In addition, the EU, US, and California have proposed several revisions to strengthen their low-carbon fuel policies. At the international level, two policies entered into force in 2013 that will improve the efficiency of marine vessels: the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP).

Climate impacts and energy use

Conclusion 2: Efficiency standards now cover three out of four light-duty vehicles sold.

In a span of just ten years through 2014, the share of global LDV sales regulated for fuel efficiency or carbon dioxide (CO_2) emissions increased from roughly 30% to over 75%. These regulatory standards are projected to reduce business-as-usual (BAU) energy consumption by 7.4 million barrels of oil per day(mbd) in 2030, equivalent to 1.5 gigatons of carbon dioxide ($GtCO_2$). However, standards adopted thus far are insufficient to offset the projected increase in vehicle activity and associated emissions.

> **Recommendation: Extend and expand light-duty vehicle efficiency standards.** The ICCT is part of the Global Fuel Economy Initiative (GFEI), a coalition that seeks to cut the fuel consumption of new light-duty vehicles in half by 2030. Considering projected growth in vehicle sales by region, the adopted standards to date are expected to reduce new vehicle fuel consumption 30% by 2030, resulting in a global average sales-weighted reduction of 22%. If GFEI's target of a 50% reduction is to be met, these standards will need to be substantially strengthened in markets with current standards and expanded to the remaining unregulated markets. Similar to the US, regions such as the EU, China, Japan would need to extend efficiency requirements through at least 2025 to increase technology investments, allow for greater lead -time, and reach the GFEI target. Such an extension and expansion of LDV efficiency standards could cut emissions by 0.95 $GtCO_2$ and 4.9 mbd in 2030.

> **Recommendation: Further catalyze the early electric-drive vehicle market.** Electric-drive vehicles have clear advantages over conventional engines due to their higher efficiency and ability to draw from low-carbon energy sources. Numerous regions have already utilized regulations, tax exemptions, public infrastructure deployment, and other non-fiscal incentives to encourage greater investment, sales, and use of electric-drive vehicles. However, electric vehicles still account for a small share of overall passenger car sales, representing less than 1% in most major auto markets. Stronger and more widespread measures are needed to achieve economies of scale, accelerate the market adoption of electric vehicles, and capture the associated benefits.

Conclusion 3: Progress in the adoption of HDV efficiency standards has been slow.

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There has been limited progress in the development of HDV efficiency standards globally, despite the fact that HDVs represent more than 40% of on-road fuel consumption in most vehicle markets. To date, efficiency standards for HDVs have been adopted in China, the US, Japan, and Canada. In many cases, data limitations, the diversity of vehicle types (e.g., long-distance heavy-duty trucks, interurban buses, garbage trucks), and insufficient industry engagement prevent more immediate progress in HDV efficiency standards in many regions. Because of increased demand for freight truck and bus transit activity, HDV emissions will continue to grow substantially, with current projections indicating a nearly 60% increase by 2030 from 2010 levels.

> **Recommendation: Expand adoption of HDV efficiency standards.**
> The expanded adoption of HDV efficiency standards could have a substantial impact on the reduction of energy consumption and GHG emissions, stabilizing HDV emissions after 2025, and saving 0.59 $GtCO_2$ and over 2.8 mbd in 2030. In particular, mandated regulatory CO_2 reductions from HDVs in the EU could also be a critical step toward similar policies in markets around the world with similar HDV fleets that are following EU emission standards. Voluntary "green freight" programs offer an important opportunity for early action and data collection for entire fleets while regulations for new HDV fuel efficiency are being considered.

Conclusion 4: Despite efficiency regulations for new marine vessels, the marine and especially the aviation sector have dramatic GHG mitigation potential

A large share of ship and aircraft emissions and fuel use are for journeys between countries, and thus their impacts remain widely unacknowledged, and mitigation actions are perpetually de-prioritized. For the marine sector, new vessel efficiency standards have entered into force, and will reduce GHG emissions by 0.34 $GtCO_2$ in 2030 compared to a BAU scenario. However, a comprehensive policy requiring mandatory reductions in in-use fuel consumption remains under development. There are currently no proposed or adopted policies for a global CO_2 standard for new aircraft or a global market-based measure to constrain and offset emissions from the in-service fleet.

> **Recommendation: Strengthen efficiency regulations for the marine sector and adopt regulations for aviation.**
> The potential to mitigate the in-use marine fleet's CO_2 emissions is among the most substantial of all policies discussed in this report. Such policies, alongside strengthened standards for new vessels, could save 0.25 $GtCO_2$ and over 1.3 mbd in 2030. Similarly, efforts by ICAO to develop both a CO_2 standard for new aircraft and a global MBM framework for the in-service fleet by 2016 could be among the most significant actions to reduce CO_2 emissions and fuel consumption from transport in the long run.

Conclusion 5: Leading low-carbon fuel policies are still in development

Many countries have now established targets for increased biofuel deployment for future years. The EU, US, and California policies have gone further, moving toward greater rigor, analysis of more fuel pathways, and lifecycle greenhouse gas accounting to better differentiate the

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sustainable fuels that are reliably low carbon. These three leading jurisdictions are still actively developing their policies, with key challenges related to how precisely they credit and promote various biofuel, fossil fuel, and electric-drive fuel sources. The EU and California regulatory standards would reduce average fuel carbon intensity by approximately 6% in the 2020 timeframe.

> **Recommendation: Promote low-carbon, deter high-carbon fuels**
> To establish more robust longer-term fuel carbon policy, countries should shift from generic biofuel targets to policies that promote fuels with reliably low lifecycle carbon, low indirect land use change, and minimal food system interaction. Recent EU-based findings indicate that up to 16% of road transport fuel could be derived from waste-based sources by 2030. In addition, fuel policy that disincentivizes the use of high-carbon fossil fuels (e.g., oil sands, high-upstream leakage natural gas) is lacking, with the possible exception of California. Over the long-term, developing these fuel policies to especially promote de-carbonized electricity (and hydrogen) for the growing number of electric-drive vehicles, will be a key climate stabilization goal for transport .

Conclusion 6: The transport sector has shown much progress in adopting climate mitigation policies to date, and further cost-effective low-carbon technologies remain.

Vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Actions toward international marine vessel efficiency have also proven the potential effectiveness of international fora when they have a sectoral focus and a strong business case. Yet many cost-effective opportunities remain to reduce transport sector CO_2 emissions and accrue fuel savings that greatly offset technology costs and “pay back” to consumers well within the lifetimes of the technology.

Penetration of cost-effective vehicle, marine, and aviation efficiency technologies and low-carbon fuels into all major vehicle markets could have dramatic effects on global CO_2 emissions and petroleum use from transport. Figure ES-1 summarizes the full effects of adopted and potential vehicle and fuel regulations on global CO_2 emissions from the transport sector. Regulations adopted to date will reduce lifecycle CO_2 emissions by 2.2 $GtCO_2$ from BAU levels in 2030, equivalent to approximately 11 mbd in reduced oil consumption . Additional reductions from the expansion of best-practice policies can deliver even greater benefits. Moving beyond currently adopted efficiency standards to also promote ultralow carbon transport alternatives like electric-drive can essentially stabilize global CO_2 emissions after 2020, even with continued growth in passenger and freight transport activity.

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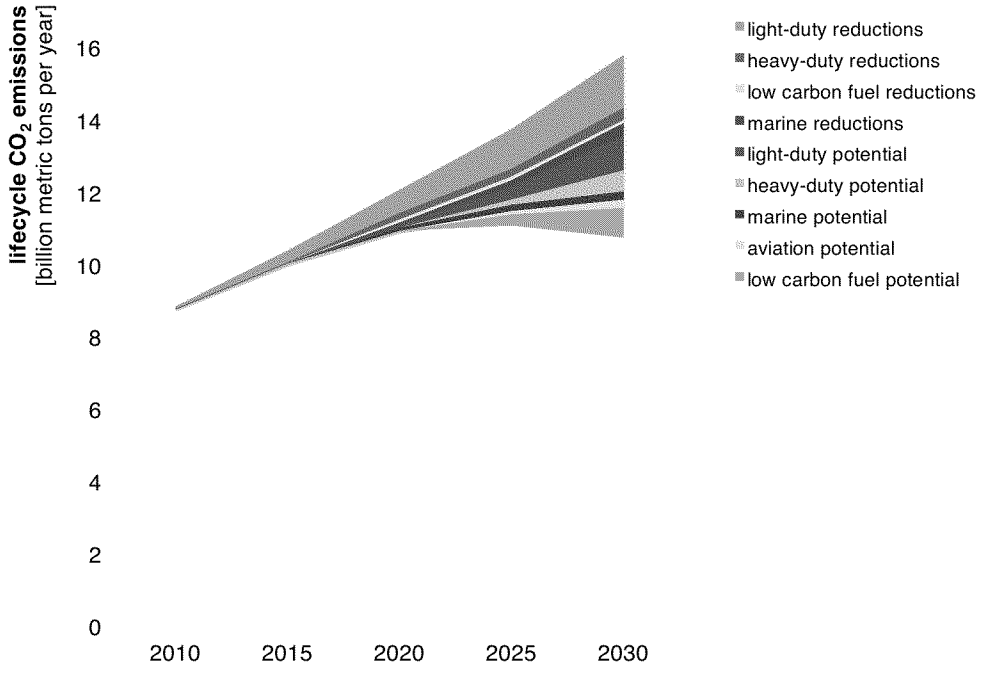


Figure ES-1. Global CO_2 emissions from transport, 2010–2030

The adopted policy actions and the potential for additional transport-sector policies to mitigate GHG emissions are substantial. However, global policies that have been adopted to date are not nearly sufficient to constrain temperature increases to two degrees Celsius and avoid catastrophic climate change. Future research should include a comparison of the impacts of adopted and potential climate mitigation actions across the economic sectors (e.g., transport, electric power, industrial, forestry) toward achieving global climate targets. Vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Yet many cost-effective opportunities remain to reduce transport sector CO_2 emissions and accrue fuel savings that offset technology costs. Such opportunities exist to extend existing policies (e.g., through 2025), adopt similar policies in emerging vehicle markets, expand progress to other transport modes (e.g., HDVs, marine, aviation, off-road), and shift to alternative low-carbon fuels.

Air pollutant emissions and public health

Conclusion 7: Two out of three new vehicles lack world-class emission controls.

World-class vehicle standards require state-of-the-art emission control technologies for local pollutants with strong adverse health impacts such as particulate matter (PM) and oxides of nitrogen (NO_x). A prominent benchmark is to achieve Euro 6/VI emission levels, at which exhaust emissions of PM and NO_x are reduced by over 97% from unregulated levels. Such standards have been adopted and implemented in the US, Japan, Canada, the EU, and South

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Korea. Other vehicle markets have not yet proposed or adopted equivalent standards, and many medium-sized vehicle markets in Asia-Pacific, Middle East, Latin America, and Africaare generally several steps behind these world-class standards. The share of light- and heavy-duty vehicle sales subject to Euro 6/VI-equivalent standards has been increasing, from roughly one in four globally in 2010 to an estimated one in three in 2015. However, much of the growth in vehicle sales is occurring in countries that ha ve yet to adopt such standards. While vehicle sales grew by over 10% in India and Brazil, and by over 18% in China between 2005 and 2013, compared to decreasing vehicle sales in most markets with world-class standards in the same time period. While several of the largest vehicle markets requirestate-of-the-art emission controls and others are considering harmonizing with existing standards, growth in urban transport activity will present an increasing public health risk unless emissions and fuel sulfur standards are brought up to date worldwide.

> **Recommendation: Expand world-class vehicle and fuel standards to emerging and developing economies.**
> Most emerging and developing regions are experiencing rapid motorization and have not yet adopted standards that require ultralow-sulfur fuel or state-of-the-art PM and NOx emission control technology. As a result, these countries would strongly benefit from the adoption of world-class vehicle and fuel standards in terms of air quality improvements and public health benefits (see Conclusion 9).

Conclusion 8: Despite progress with current emission standards for international marine and aviation, future policy and timelines remain uncertain.

The IMO is responsible for setting emission standards for international vessels, and has to date regulated emissions of NO_x and sulfur content of bunker fuels with more stringent limits applied to Emission Control Areas (ECAs). The regulation of black carbon to reduce adverse impacts on climate and human health is pending technical discussions regarding black carbon definition and measurement methods.

For international aviation, ICAO has developed multiple tiers of global aircraft NO_x emission standards, which are based on the landing take-off (LTO) cycle and are targeted towards air quality improvements around airports. These global standards are then translated into national requirements under domestic legislature and implemented by national transportation or environmental authorities.

> **Recommendation: Strengthen existing standards and develop new standards for PM emissions for international marine and aviation.**
> For international marine, proven technologies and fuels can reduce emissions of PM, sulfur oxides (SO_x), and NO_x by over 90% from uncontrolled levels. More-stringent standards to drive the adoption of these technologies and fuels could reduce international marine emissions of NO_x by 24%, and PM and SO_x emissions by roughly 80% in 2030 from BAU levels.

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For aviation, in 2010 ICAO established more aggressive but non-binding NO_x reduction targets equivalent to a 45% reduction from the latest standard by 2016 and a 60% reduction by 2026. Making these non-binding targets mandatory would ensure that the intended benefits would be realized . Ideally, the ICAO would adopt its non-volatile particulate matter (nvPM) standard, aimed at reducing the impacts of ultrafine PM on air quality, human health, and global climate, by 2016, in line with ICAO's expectations.

Conclusion 9: Expanded adoption of standards requiring best-practice vehicle emission controls and ultralow-sulfur fuel could avoid three out of four premature deaths from exposure to air pollution emitted by vehicles in 2030.

Figure ES-2 illustrates the effects of two vehicle technology pathways on the number of global premature deaths caused by exposure to vehicle emissions in the year 2030. These estimates are strictly limited to exhaust emissions of $PM_{2.5}$ from light- and heavy-duty on-road vehicles in urban areas and thus represent a conservative estimate of health impacts from transport. Without additional action beyondthe currently adopted regulations, the number of premature deaths from direct exposure to on-road vehicle emissions could grow by two-thirds in just 16 years. The vast majority of these impacts would occur in India, China, Brazil, Mexico, and the countries in the Asia-Pacific, Latin America, Middle East, and Africa. As shown in the figure, implementing world-class emission standards would reduce global transport-related air pollution mortality in 2030 from approximately 270,000 deaths to 71,000 deaths in 2030, with benefits that are greatly concentrated in major cities.

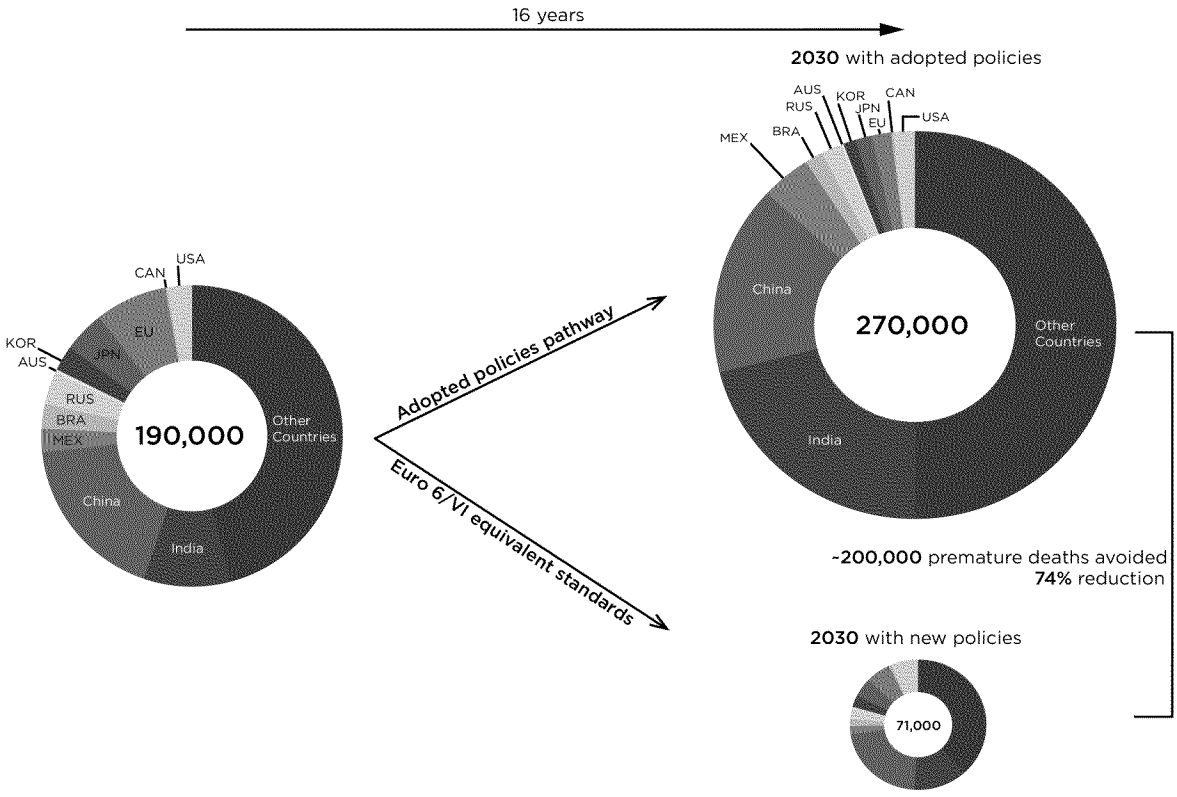
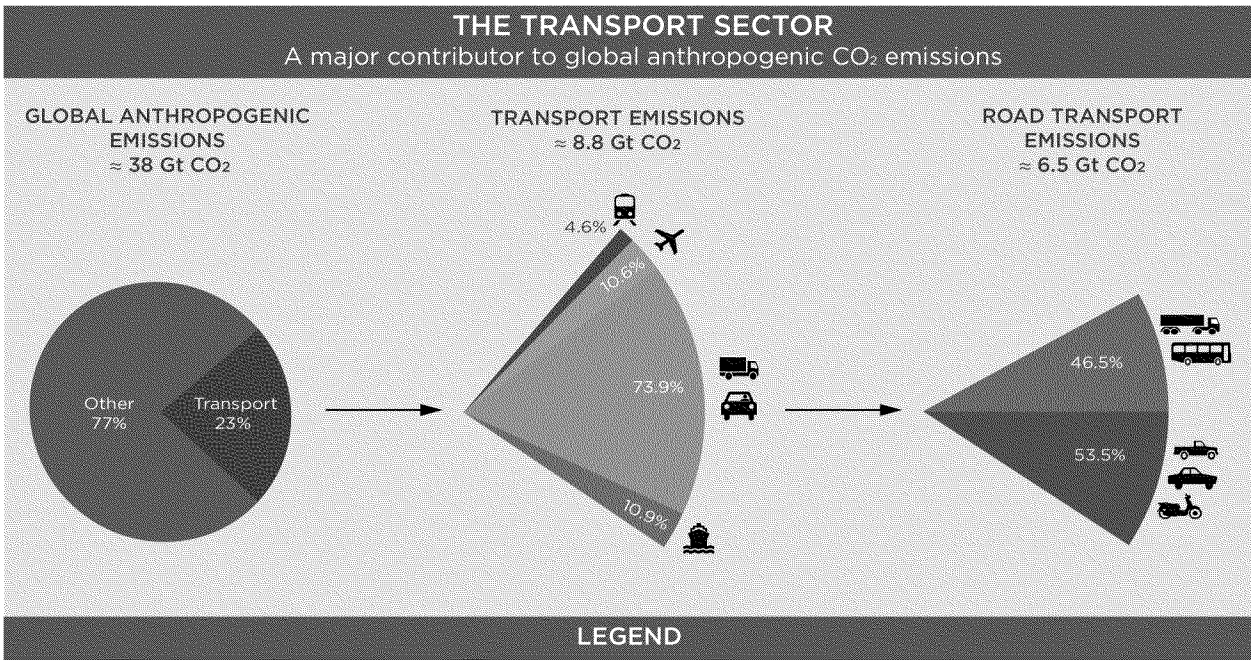


Figure ES-2. Global premature deaths from light- and heavy-duty vehicle exhaust $PM_{2.5}$

CHAPTER 1. INTRODUCTION

The transport sector has seen unparalleled global growth in the past two decades, in the form of increased vehicle ownership, passenger and freight activity, and energy use across all transport modes. Transport sector growth has greatly surpassed industrial and energy sector growth in most large economies. Despite the evident economic benefits from increased mobility and freight trade, such activity has negative consequences such as increased petroleum use and associated climate and health impacts. Driven largely by transport sector growth, world oil use, including its unconventional oil and other fossil replacements , is expected to surpass 100 million barrels of oil per day (mbd) in the 2020 -2025 timeframe (IEA, 2013). To help mitigate the associated environmental effects, many governments have begun to developtransport sector policies improve the environmental and energy performance of vehicles and fuels.

In 2010, the global transport sector was responsible for almost a quarter of all anthropogenic CO_2 emissions, resulting in the release of 8.8 $GtCO_2$ into the atmosphere and consuming 46 mbd (Figure 1). Within the transport sector, on-road vehicles accounted for about three quarters of fuel consumption (35 mbd) and CO_2 emissions (6.5 $GtCO_2$). (See Box 1).



Notes:
Global anthropogenic CO_2 emissions in 2010 based on IPCC (2014).
Transport CO_2 emissions in 2010 estimated by ICCT (2014) include the full fuel lifecycle, including direct emissions from combustion & upstream emissions from extraction, refining, & distribution of fuels.
Sources:
ICCT (2014). Global Transportation Roadmap Model. Available from http://www.theicct.org/global-transportation-roadmap-model
IPCC (2014). Summary for Policymakers. Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Figure 1. Global transport sector lifecycle CO_2 emissions, 2010

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Box 1. Fuel consumption and carbon dioxide metrics

While the vast majority of transport fuel is derived from fossil fuels, a small but growing share consists of biofuels, electricity and hydrogen derived from renewable energy sources. Throughout this report, estimates of fuel consumption are given in **million barrels of oil equivalent per day**, abbreviated as **mbd**.

Many sources estimate direct CO_2 emissions from fuel combustion, also known as "tank-to-wheel" emissions; however, it is also important to consider the upstream, or "well-to-tank" emissions that are generated from the extraction, refining, and distribution of transport fuels. The estimates in this report consider the full fuel lifecycle, or "well-to-wheel" and include both combustion and upstream emissions; these are given in **million** or **billion metric tons per year**, abbreviated as **$MtCO_2$** and **$GtCO_2$**, respectively. These estimates do not include emissions from the manufacture or scrappage of vehicles, ships, or planes, or emissions associated with transport infrastructure.

Motorized transport is a major contributor to outdoor air pollution, particularly near major roadways and in urban areas with a high concentration of vehicle activity. Exposure to outdoor air pollution resulted in 3.2 million early deaths worldwide and ranks among the top ten health risks (Lim et al. 2012). Figure 2 compares the annual average $PM_{2.5}$ concentration in 2010 of cities worldwide with over 100,000 inhabitants against the levels recommended by the World Health Organization (WHO). Most cities worldwide have serious air quality problems, in particular those in the Asia-Pacific region. Particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$) is among the most harmful vehicle pollutants with a range of associated health impacts including cardi ovascular and respiratory diseases, lung cancer, and infant mortality. In response to the serious health impacts from vehicle emissions, state-of-the-art emission control technologies have been developed which are capable of reducing emissions of particulate matter (PM) and oxides of nitrogen (NO_x) by over 97% from unregulated levels (Johnson, 2012). Advancing to world-class vehicle emission standards (with stringency equivalent to Euro 6/VI or better) paired with requirements for ultralow-sulfur fuel can dramatically reduce emissions of local air pollutants and associated health impacts, even amid growth in vehicle activity.

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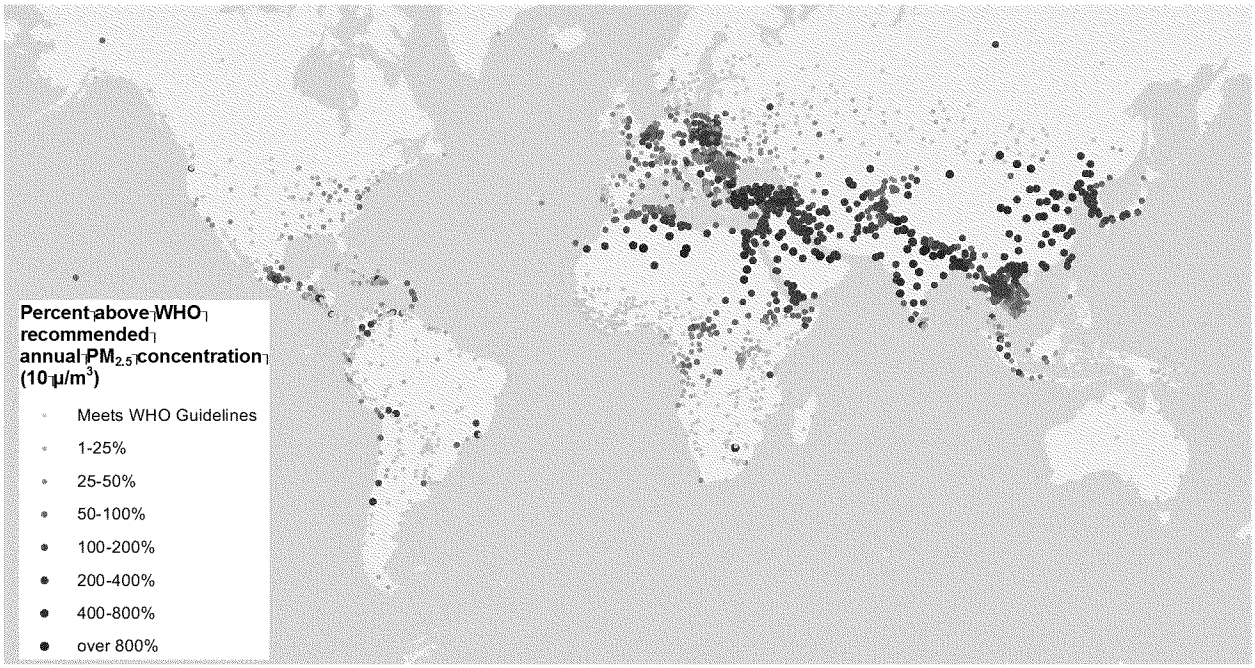


Figure 2. Annual Average $PM_{2.5}$ Concentrations Relative to WHO Guidelines (Adapted from Brauer et al., 2012 and WHO, 2014)

Includes monitoring data from WHO (2014) and modeled concentrations f rom Brauer et al. (2012) for 2010 where monitoring data was not available.

This report covers 11 of the top vehicle markets that represented 85% of total vehicle sales in 2013 (Figure 3). These markets include China, US, EU, Japan, Brazil, India, Russia, Canada, South Korea, Australia, and Mexico. These regions are collectively referred to as "selected markets" in this report. While this edition focuses on 11 selected vehicle markets, future editions may expand the scope to include regulatory developments in growing vehicle markets such as Thailand, Indonesia, Argentina, Turkey, Saudi Arabia, Iran, Malaysia, and South Africa – each of which had over half a million new vehicle sales in 2013.

The scope of this report is limited to on-road vehicles, marine, and aviation, and excludes motorcycles, locomotives, and off-road vehicles. Future editions may expand the scope to include motorcycle and rail policies. The scope of policies covered includes national-level vehicle efficiency and GHG standards, tailpipe emission standards for local air pollutants, and low-sulfur fuel standards, as well as international regulations for marine vessels and aircraft. Policies that aim to reduce transport activity and shift people and goods to more environmentally-friendly modes are beyond the scope of this work, but we recognize their critical role in meeting global climate targets as described in a previous analysis (Façanha et. al, 2012).

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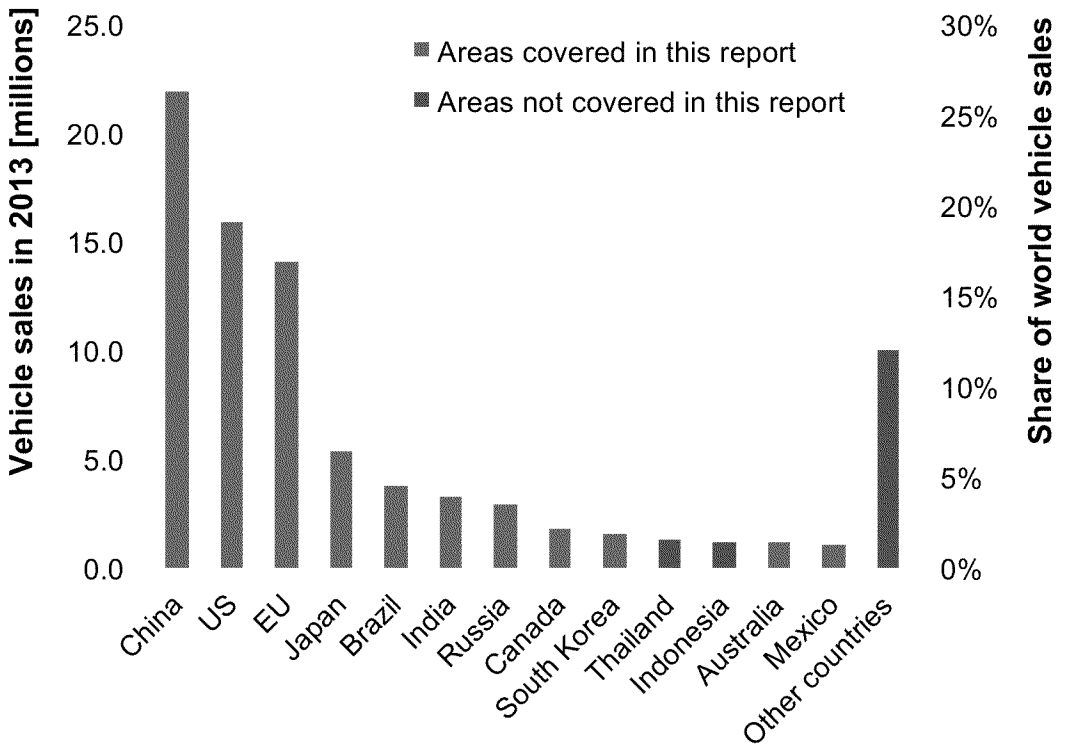


Figure 3. Sales of light- and heavy-duty vehicles by region in 2013 (Based on OICA, 2014)

Clean vehicle and fuel policies are an essential part of local, national, and international efforts to reduce energy consumption, mitigate climate change, and ensure adequate air quality. Such findings are demonstrated in wide ranging studies by the IPCC, IEA, and UNEP, among many others (An et al., 2011; GFEI, 2014; IEA, 2012; IPCC, 2014; Shindell et al., 2011; UNEP, 2011). Two previous ICCT studies have contributed to recent international modeling work and policy studies by assessing the direct effects of adopted national-level clean vehicle and fuel policies on emissions of GHGs and local air pollutants, and evaluating the benefits of actionable timelines for new policies to reduce energy consumption and mitigate impacts of vehicle emissions on climate, air quality, and health (Façanha et al., 2012; Chambliss et al., 2013).

This report builds upon previous work to create a novel synthesis of information and analysis on clean transport policy, bringing together the following elements: (1) Summarize the state of clean vehicle and fuel policies; (2) Provide an update of recent regulatory developments in major markets; (3) Quantify the impacts of recently adopted policies on climate, energy, and health; (4) Evaluate the benefits of strengthening and expanding international best practices . The report aims to accomplish these elements by synthesizing technical and regulatory work in the top vehicle markets worldwide. This work relies heavily on TransportPolicy.net, a collaborative effort between the ICCT and DieselNet that provides accurate, up-to-date, referenceable, and comprehensive information regarding regulatory policies for clean vehicles and fuels (ICCT & DieselNet, 2014). (See Box 2). This study also relies on ICCT's validated methods for emissions quantification, including our publicly-available Roadmap model that

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evaluates the impacts of transport policies on energy, GHGs, emissions of local air pollutants, and health (See Façanha et al., 2012; Chambliss et al., 2013; ICCT, 2014).

Box 2. Hyperlink references to TranportPolicy.net

In addition to the standard referencing to technical and government reports, this report contains hyperlinks to pages on the TransportPolicy.net website. This site is maintained by the ICCT as a public repository and reference site for technical and implementation details of fuel quality, vehicle, marine, and aviation policies described herein.

This first edition of the *State of Clean Transport Policy* seeks to summarize, track, and quantify the impacts of such vehicle and fuel standards – with an aim to provide annual updates as transport policies and systems evolve. The remainder of the document is organized as follows. Chapter 2 provides an update of regulatory policies for clean vehicles and fuels that were proposed, adopted, or first implemented from January 2013 through July 2014. Chapter 3 evaluates the effects of clean transport policies adopted to date on energy consumption, transport emissions, and health impacts, and quantifies the benefits of strengthening and expanding the adoption of international best practices. Finally, chapter 4 summarizes the key conclusions and recommendations for future policy action based on recent progress and current policy developments.

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CHAPTER 2. NEW NATIONAL AND INTERNATIONAL REGULATIONS 2013-2014

This chapter provides an update of regulatory policies for clean vehicles and fuels that were proposed, adopted, or first implemented from January 2013 through July 2014. Each of the following sections contains a table that summarizes recent regulatory developments, provides a measure of each regulation's stringency, estimates the reduction in annual CO_2 emissions in 2030 (for efficiency policies), and hyperlinks to more information. Technical information is linked to TransportPolicy.net, a site maintained by the ICCT and DieselNet which provides comprehensive, up-to-date, and sourced information on energy and environmental regulations in the transport sector worldwide, with a focus on vehicles and fuels. Policy updates are linked to the ICCT's website (theicct.org), which provides additional publications regarding international best practices and technical analyses of the costs, benefits, energy and environmental impacts of the regulations. Key terms related to the status of regulations are summarized in Box 3.

Box 3. Key terms related to regulatory status

While the processes that regulations undergo from consideration to implementation vary by region and policy type, the terms used in this report are defined as follows unless otherwise indicated:
Proposal – refers to a published regulatory proposal that has not yet been adopted
Adoption – indicates that a regulation has been finalized, with established dates for phase-in and implementation for the regulatory requirements
Entry into force – refers to the date at which an international regulation becomes legally binding upon Governments that have ratified it; in the EU, this corresponds to implementation
Delay – indicates when a regulation has been formally adopted, but one or more implementation dates have been set back
Implementation begun – indicates when new vehicle type approvals are first subject to a new regulation; for fuel sulfur standards, corresponds to availability of fuel meeting requirements
Current implementation – indicates all vehicle sales and registrations of new vehicles are subject to the regulation

2.1. Efficiency of light- and heavy-duty vehicles

Through July 2014, all selected markets except Australia and Russia have adopted fuel efficiency and GHG regulations or equivalent fiscal measures for light-duty vehicles (LDVs). In contrast, only China, the US, Canada, and Japan have adopted similar regulations for heavy-duty trucks and buses (Table 1). The latest phase of LDV standards will reduce CO_2 emission rates of new vehicles (in grams per vehicle-km) between 9% and 35%, compared to 11% to 14% for the first phase of HDV standards.

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Table 1. Adopted regulations for light- and heavy-duty efficiency in selected regions

	Light-duty vehicles			Heavy-duty vehicles		
Region [a]	Baseline Model Year [b]	Implementation Period (Model Year)	Reduction in average CO_2 rate (grams/vehicle-km)	Baseline Model Year	Implementation Period (Model Year)	Reduction in average CO_2 rate (grams/vehicle-km)
Australia	–	–	–	–	–	–
Brazil	2013	2013-2017	12% [c]	–	–	–
Canada	2011	2011-2016	20%	2011	2014-2018	14%
China	2011	2012-2015	9%	2012	2014-2015	11%
EU	2015	2020-2021	27%	–	–	–
India	2012	2016-2021	17%	–	–	–
Japan	2015	2020	16%	2006	2015	12%
South Korea	2011	2012-2015	9%	–	–	–
Mexico	2012	2014-2016	13%	–	–	–
Russia	–	–	–	–	–	–
US	2017	2017-2025	35%	2011	2014-2018	14%

Shaded cells = Adopted or newly implemented between Jan. 2013 and Jul. 2014 " – " = No standard

[a] *Includes eleven of the top vehicle markets (Australia, Brazil, Canada, China, EU, India, Japan, Korea, Mexico, Russia, and the US)*

[b] *Percent reduction in new fleet fuel consumption estimated from a baseline year (not necessarily first model year of implementation) to the final model year covered by the regulation. Reductions for HDVs are sales -weighted by vehicle type. Source: TransportPolicy.net*

[b] *Brazil's Inovar-Auto program requires a 12.1% improvement for manufacturers to qualify for a 30% reduction in vehicle sales tax.*

The following tables summarize recent developments in regulations to reduce the fuel consumption and GHG emissions of LDVs and HDVs. Since the beginning of 2013, five of the selected markets – China, the EU, Brazil, India, and Mexico – have formally proposed, adopted or newly implemented regulations or equivalent fiscal measures to improve LDV efficiency (Table 2). This progress occurred after the adoption in 2012 of new LDV efficiency standards in the US, which extend the benefits of improved vehicle efficiency from 2017 to 2025. LDV regulation stringency is summarized by the new fleet target in grams CO_2 per vehicle-km, which ranges from 95 to 169 gCO_2/km, demonstrating significant potential for further benefits by reducing the disparities among countries with LDV efficiency standards in place. As shown in Table 2, these regulatory developments are expected to avoid an estimated 420 $MtCO_2$ in 2030.

Table 2. Regulatory developments in light-duty vehicle efficiency in 2013-2014

Regulatory development	New fleet target (grams CO_2 per km) [a]	CO_2 reduced in 2030 (Mt per year) [b]	More information
Brazil implemented Inovar -Auto in 2013, a fiscal instrument that incentivizes makers of passenger vehicles and light commercial vehicles to improve new fleet efficiency by 12-19% between 2013 and	– [c]	**19**	Technical Policy update (Façanha, 2012)

2017.			
China released rules for calculating corporate average fuel consumption of passenger cars to support enforcement of Phase 3 efficiency standards, which target a fleet average fuel consumption of 6.9L/100km in 2015.	2015: **161**	–	Technical Policy update (He & Yang, 2014a)
China renewed and enhanced subsidies for energy-efficient passenger vehicles, tightening fuel consumption requirements by 2-14% and offering market incentives for early compliance with China 5 emission standards on vehicles with engines less than 1.6L.	–	–	Policy update (He, 2013)
EU adopted 95 gCO_2/km standards for passenger cars with full compliance in 2021, and 147 gCO_2/km standards for light co mmercial vehicles with compliance in 2020.	2020: **95 / 147**	**140**	Technical Policy update (Mock, 2014)
India adopted the country's first passenger vehicle efficiency standards, which take effect in 2016 and set a target of 113 gCO_2/km by 2021.	2021: **113**	**50**	Technical
Mexico adopted CO_2 standards for cars, pickups, and SUVs from model years 2014-16, setting a fleet average target of 14.6 km/L in 2016.	2016: **169**	**17**	Technical Policy update (Blumberg, 2013)
China released a proposal for Phase 4 fuel consumption standards that set a target of 5L/100km by 2020.	2020: **117**	**190**	Technical Policy update (He & Yang, 2014b)
TOTAL		**420 $MtCO_2$**	

Implemented Adopted Proposed Delayed implementation

[a] *All values adjusted to NEDC test cycle. Source: He & Yang (2014c).*
[b] *Estimates are rounded to two significant digits.Source: ICCT (2014).*
[c] *"–" indicates not applicable or no estimate is available.*

Compared to regulations for LDV efficiency, HDVs have a relatively short regulatory history, with 2014-2015 a landmark period of implementation for all four mandatory HDV efficiency standards. The lead times between adoption and implementation of HDV efficiency standards are progressively shortening: Japan's Phase 1 standard was adopted in 2005, and financial incentives for early compliance came into effect several years before full implementation, which is scheduled for 2015. Such regulations were subsequently adopted in the US (2011) and Canada (2013) and applied to model year 2014 vehicles. In contrast, China's Phase 2 standard was finalized in February 2014 and applied to new type approvals only a few months later,

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starting in July 2014. Other regions, however, have yet to adopt such standards. For example, Europe has adopted standards for light commercial vehicles[1] (LCVs) through 2020 but has not adopted standards for heavier vehicles, which account for a much larger share of energy consumption. In Table 3, the associated stringency of HDV standards is estimated according to the expected reduction in new vehicle fleet fuel consumption over the timeframe of the regulation, weighted by the activity of each vehicle type (e.g., vocational, straight truck, and tractor-trailers). As shown in the table, these regulations will avoid an estimated 210 $MtCO_2$ in 2030.

Table 3. Regulatory developments in heavy -duty vehicle efficiency in 2013-2014

Regulatory development	Percent reduction in new fleet fuel consumption [a]	CO_2 reduced in 2030 (Mt per year) [b]	More information
Canada's Phase 1 standards were adopted in March 2013 and applied starting with model year 2014 vehicles. These standards, which are closely aligned with the US rules, require CO_2 emission reductions of 6-23% and will be fully phased in by 2018.	**14%**	**12**	Technical Policy update (Sharpe, 2013)
Japan's financial incentives for early compliance with the Phase 1 standard are in effect; the standard becomes fully enforceable in 2015. [c]	**12%**	**12**	Technical
US Phase 1 standards came into effect starting with model year 2014 vehicles. The standards require CO_2 emission reductions of 6-23% and will be fully phased in by 2018.	**14%**	**76** [d]	Technical Policy update (Sharpe, 2011)
China adopted Phase 2 fuel consumption standards in February 2014. The standard applied to new type approvals only a few months later, in July 2014; the standard is expected to reduce new fleet average fuel consumption 11% by July 2015.	**11%**	**110**	Technical Policy update (He & Tu, 2014)
TOTAL		**210 $MtCO_2$**	

Implemented Adopted Proposed Delayed implementation

[a] *Vehicle activity-weighted reduction in new fleet fuel consumption over the timeframe of the regulation.*
[b] *Estimates are rounded to two significant digits.Source: Façanha et al. (2012).*
[c] *MLIT (2012).*
[d] *CO_2-equivalent estimate. Source: EPA (2011).*

[1] Light commercial vehicles include light trucks and vans. Such vehicles weighing less than 2500kg gross vehicle weight rating (GVWR) are considered light-duty vehicles. In North America, the definition extends to vehicles weighing up to 3863kg.

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2.2. Air pollutant emissions of light- and heavy-duty vehicles

Light-duty vehicles (LDVs) are significant contributors to urban air quality issues, especially for pollutants that form in the atmosphere such as ozone and secondary PM. In countries that allow diesel LDVs to be sold, the light-duty fleet can also be a major source of direct PM emissions. While the most stringent emission standards currently in effect are US Tier 2 and Japan's New Post Long-Term Standards, Euro 6 will come into effect in September 2014 in the EU. The US EPA's Tier 3 standards require significant improvements from the emission standards currently in force and could push the next generation of LDV emission controls. While heavy-duty vehicles (HDVs) in most countries constitute only a small share of the total vehicle fleet, they contribute more than two-thirds of exhaust PM and NO_x emissions from on-road vehicles. The most stringent emission standards for HDVs that have already been adopted are US 2010, Japan's New Post Long-Term Standards, and Euro VI. These stringent emission standards for LDVs and HDVs, which are referred to as Euro 6/VI-equivalent standards, require ultra low-sulfur fuel, with 15 parts per million (ppm) or less.

Box 4. Regulations for vehicle pollution and fuel sulfur content

The regulatory approaches for vehicle emissions and fuel quality developed in the US and Europe provide a pathway that other countries can follow to improve the environmental performance of their vehicle fleets. Regulations for LDVs in Europe progress from Euro 1 to Euro 6 using Arabic numerals, and in the US include Tier 1, Tier 2, and Tier 3 – the most recent of which sets the most stringent emission limits of any LDV regulation in the world. HDV regulations in Europe progress from Euro I to Euro VI using Roman numerals, and in the US include EPA 2004, 2007, and 2010 standards. Regulations for LDVs require new vehicles to meet emission limits based on distance traveled, while those for HDVs tend to limit new vehicle emissions based on engine work done. Both such standards tend to apply first to all new type approvals, followed by application to all new sales and registrations up to a year or so later. The timelines in this report refer to standards by the date of application to all new sales and registrations. The impact of these standards on fleetwide emissions depends on the rate of fleet turnover, which averages significantly longer for HDVs than for LDVs.

In the US, EU and Japan, vehicle emissions regulations have accelerated the commercialization of advanced emission control technologies. Because many of these technologies require cleaner fuels to function optimally, vehicle regulations have been paired with fuel quality regulations that allow the proper function of emission controls as well as reduce emissions from the legacy fleet. Such regulations have proven to be a highly cost-effective means of controlling vehicle emissions, with the most recent Tier 3 LDV regulations in the US yielding 4.5 to 13 dollars of benefits for every dollar spent on cleaner vehicles and fuel (EPA, 2014). Today, the technologies for clean vehicles and fuels necessary to meet the latest regulations in the US, Europe, and Japan are commercially available and can be transferred to other countries that adopt such regulations. For additional background on vehicle emissions standards, see Chambliss et al. (2013).

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Six of eleven selected markets have yet to adopt Euro 6/VI-equivalent standards for LDVs, HDVs, and fuels, and some lag by two or more levels of emission standards. The implications of this lag are particularly strong for diesel vehicles, which effectively require the latest emission control technologies (e.g., diesel particulate filters) only under Euro 5 for LDVs and Euro VI for HDVs. Table 4 summarizes the vehicle emissions and fuel standards that are currently in effect for all sales and registrations in selected regions; where applicable, adopted regulations that have yet to be implemented are indicated as "Adopted."

Table 4. Light- and heavy-duty vehicle emissions and fuel sulfur standards in selected regions

Region	Percent of world vehicle sales 2013	Emission standards				Fuel sulfur standards			
		Light-duty		Heavy-duty		Gasoline		Diesel	
		Current [a]	Adopted	Current	Adopted	Current	Adopted	Current	Adopted
China	25%	China 4	China 5	China IV		50	10	350	10
US	19%	Tier 2	Tier 3	US 2010		30	10	15	
EU	17%	Euro 5b	Euro 6	Euro VI		10		10	
Japan	6%	PNLT		PNLTES		10		10	
Brazil	4%	L-6		P-7		50		500 (10) [b]	
India	4%	Bharat III	[d]	Bharat III		150		350 (50)	
Russia	3%	Euro 4	Euro 5	Euro IV	Euro V	150	10	350	10
Canada	2%	Tier 2	[e]	US 2010		30		15	
South Korea	2%	Euro 6		Euro V	Euro VI	10		10	
Australia	1%	'Core' Euro 5	Euro 6	Euro V /US07/JE05		150 (50)		10	
Mexico	1%	Tier 1 / Euro 3		US 2004 /Euro IV		150 (30)		500 (15)	
Other countries	*15%*								

Euro-equivalent [c]

Euro 3/III | Euro 4/IV | Euro 5/V | Euro 6/VI | Post Euro 6/VI

[a] *"Current" indicates standards apply to all vehicle sales and registrations. " Adopted" indicates standards that do not yet apply tœall vehicle sales and registrations. Source: TransportPolicy.net*

[b] *Values in parentheses indicate higher quality fuel is available sub-nationally, but not required exclusively nationwide.*

[c] *Euro-equivalent emission standards based on limit values.*

[d] *As of April 2014, Bharat IV standards are in effect in 33 cities including the national capital region; however a nationwide implementation date has yet to be formally adopted.*

[e] *Canada has announced intention to harmonize with the US Tier 3 regulation; however formal adoption is pending.*

From January 2013 through July 2014, several of the top vehicle markets implemented new standards for LDVs and HDVs (Table 5); notably, Brazil and Russia began type approvals for light-duty standards based on Euro 5, while the EU and South Korea began type approvals for heavy-duty Euro VI standards. After several years of delay citing unavailability of high quality fuel, China has begun implementation of China IV standards. For reference, Table 5 summarizes the average reduction in limit values for PM and NO_x compared to the previous standards in each region. While the real-world reductions in emissions depend on a number of

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factors, such as the specific emission control technologies utilized, the success of compliance and enforcement programs, and the duty cycle of the vehicle, the regulatory developments since 2013 set a course for significantly improved air quality in over half of selected markets.

Table 5. Regulatory developments for light - and heavy-duty vehicle emissions in 2013-2014

Regulatory development	Percent reduction in emissions [a]	More information
Light-duty vehicles		
Brazil began type approvals for L-6 standards in January 2014. The standard will apply to all sales and registrations in January 2015. While based on Euro 5, L-6 does not include the particulate filter-forcing mass and number emission standards.	PM: **50%** NO_x: **50%**	Technical
Russia began type approvals for Euro 5 vehicles starting in 2014. The standard will apply to all sales and registrations in January 2015.	PM: **80%** NO_x: **25-28%**	Technical
US adopted Tier 3 emission standards, to be phased in from MY 2017 and fully implemented by 2025. Tier 3 emission limits are significantly lower than Euro 6.	PM: **70%** NO_x: **80%**	Technical Policy update (German, 2014)
Heavy-duty vehicles		
China implemented China IV standards for all sales and registrations in July 2013. China IV standards are closely aligned with Euro IV requirements.	PM: **80%** NO_x: **30%**	Technical
EU implemented Euro VI standards for all sales and registrations in January 2014.	PM: **50%** NO_x: **80%**	Technical
South Korea began type approvals for Euro VI standards in January 2014. The standard will apply to all sales and registrations in January 2015.	PM: **50-65%** NO_x: **77-80%**	Technical
Russia began type approvals for Euro V standards in January 2014. The standard will apply to all sales and registrations in January 2016.	NO_x: **43%**	Technical

Implemented Adopted Proposed Delayed implementation

[a] *Percent reductions in PM and NO_x emissions are estimated based on the limit values of the new standard compared to the previously implemented standard in that region. Source: TransportPolicy.net.*

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2.3. Sulfur content of gasoline and diesel on-road fuels

Fuel quality, most notably the sulfur content of gasoline and diesel, is key to the implementation of advanced vehicle emission controls. For optimal function of emissions controls, Euro 3/III vehicles generally require a maximum sulfur content of approximately 350 parts per million (ppm) for diesel and 150 ppm for gasoline, and Euro 6/VI-equivalent vehicles require fuel as low as 10 ppm sulfur. Limiting the sulfur content of fuels also reduces emissions from legacy fleets (Blumberg et al., 2003), and previous research indicates that can be done at less than a few cents per liter (Hart Energy & MathPro Inc, 2012). In fuel importing countries, comprehensive fuel quality regulations can have immediate effects without changes to fueling infrastructure; in fuel producing countries, refinery upgrades can be required or incentivized through relaxed fuel price controls, direct subsidies, or tax incentives.

Progress in reducing sulfur levels in on-road fuels around the world has been significant but uneven since 2001. Currently only six of the selected vehicle markets limit diesel sulfur content to 15 ppm or less nationwide, with China committing to do so by 2018. And while eight of the selected vehicle markets limit gasoline sulfur content to fewer than 50 ppm nationwide, only six have committed to tighten this limit to 10 ppm, the level recommended for world-class vehicle emission controls.

Table 6. Regulatory developments in nationwide fuel quality in 2013-2014

Regulatory development	Fuel sulfur content (ppm)	More information
Gasoline		
Brazil phased out 1000-ppm gasoline in favor of 50-ppm nationwide as of January 2014.	**50**	Technical
China issued a regulation in accordance with a 2013 State Council mandate requiring China V gasoline below 10-ppm sulfur nationwide by 2018.	**10**	Technical Policy update
US adopted Tier 3 emission standards which will reduce gasoline sulfur content from an average of below 30-ppm to below 10-ppm by 2017.	**10**	Technical Policy update
Diesel		
Brazil phased out 1800-ppm diesel in favor of 500-ppm nationwide; as of January 2013, 10-ppm diesel is available in major cities and select stations to fuel P-7 trucks.	Nationwide: **500** Major cities: **10**	Technical
China issued two regulations in accordance with a 2013 State Council mandate requiring nationwide China IV diesel (50-ppm) by 2015, and China V diesel (10 -ppm) by 2018.	2015: **50** 2018: **10**	Technical Policy update

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Implemented Adopted Proposed Delayed implementation

2.4. International Marine Vessels

Emissions of CO_2, SO_x, and NO_x from international marine vessels are regulated by the International Maritime Organization (IMO). Two newly adopted – and one delayed – marine emission reduction policies are summarized in Table 7. In 2013, the Energy Efficient Design Index (EEDI) entered into force, becoming the first regulation to establish CO_2 emission standards across a global sector. EEDI essentially requires new ships to be progressively more efficient from 2015 through 2030, as compared against the average 2000-2010 ships of the same type. For non-CO_2 pollutants, 2014 saw the successful implementation of the newest emission control area (ECA), the US Caribbean Sea ECA, to regulate NO_x and SO_x emissions. ECAs are sea areas that are specially designated by the IMO for enhanced mandatory measures to control air pollution from ships, including maximum fuel sulfur content and exhaust NO_x emission levels (IMO, 2014). Today, ships traveling in ECAs must meet stricter fuel sulfur requirements than elsewhere; and in 2016, new ships will be required to meet special NO_x emission standards (Tier 3) when traveling within ECAs. Following Russia's proposal to delay the implementation of Tier 3 NO_x standards in ECAs, the IMO upheld the 2016 implementation date for existing ECAs (including the US and the Caribbean ECA), but delayed this date for NO_x ECAs entering into force in later years.

Table 7. Regulatory developments in interna tional marine in 2013-2014

Regulatory development	Effect of policy	More information
Efficiency		
Adopted by the **IMO** in 2011, the EEDI entered into force in 2013, applying to all global ships over 400 gross tonnage. EEDI requires new build ships to be 10 % more efficient by 2015, from a baseline representing the average efficiency for ships built between 2000 and 2010.	New build ship efficiency improvement in 2015: **10%** 2020: **20%** 2025: **30%**	Technical
	340 $MtCO_2$ in 2030 (lifecycle)	Publication (Wang & Lutsey, 2013)
Emissions		
The **US Caribbean Sea ECA** became enforceable in January 2014, reducing fuel sulfur content from 3.5% to 1%. This limit tightens to 0.1% sulfur in 2015, and Tier 3 NO_x standards become enforceable in 2016.	Reduction in fuel sulfur: 2014: **71%** 2015: **90%** NO_x reduction from Tier 3: 2016: **74-76%**	Technical
After a **Russian** proposal to delay the implementation	NO_x reduction from Tier 3	Blog

of Tier 3 NO_x standards to 2021, IMO reached a compromise that upholds implementation in existing ECAs in 2016; Tier 3 in future ECAs will be determined by the date of application approval.	in existing ECAs 2016: **74-76%** Tier 3 NO_x in future new ECAs: **delayed**	(Rutherford, 2014)

Implemented Adopted Proposed Delayed implementation

2.5. International Aviation

Although no new regulations for international aviation emissions have been proposed, adopted, or implemented in the study period, two policy developments at the Ninth meeting of ICAO's Committee for Aviation Environmental Protection (CAEP) merit mention. The first is a new CO_2 certification requirement for new aircraft, which will serve as a key building block for the CO_2 standard under development by ICAO by 2016 (Rutherford, 2013). The second is a revised "Chapter 14" noise standard for new aircraft which will take effect in 2017 and aim to address existing noise problems at airports, notably in Europe (Dickson, 2013).

2.6. Low-carbon fuels

There have been a number of significant low-carbon fuel policy developments in 2013 and early 2014. Table 8 summarizes the low-carbon fuel policies that have recently seen proposed revisions (and are already being implemented) to promote increased deployment of low carbon fuels. The California Low Carbon Fuel Standard (LCFS) was originally proposed in 2009 and has been implemented since 2010. The LCFS is a fuel-neutral performance standard that would reduce average road transport fuel carbon intensity, measured in gram CO_2e per megajoule of fuel, by 10% by 2020 by requiring fuel providers to increasingly mix in lower carbon fuels to displace conventional gasoline and diesel fuels. This regulation would require increasing use of biofuel, natural gas, and electricity with documented low lifecycle GHG characteristics in vehicles through 2020. The LCFS has withstood several legal questions through 2014, is being implemented, and is expected to adopt several revisions in the 2014-2015 timeframe. The US EPA's Renewable Fuel Standard has established various requirements for increasing volume of biofuel (and other eligible renewable natural gas and electricity sources) up to 36 billion gallons through 2022. The requirements include minimum requirements of fuels within given categories, that have associated minimum required GHG reduction(i.e., of 20%, 50% and 60%) below gasoline and diesel fuels. The US RFS policy has added many eligible low-GHG fuel pathways in 2013 and early 2014, and has continued to revise the biofuel volume targets within each fuel category from year to year (see US EPA, 2014).

Table 8. Regulatory developments in low-carbon fuel policy in 2013-2014

Regulatory development	Effect of policy	More information

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California proposed modifications to its Low Carbon Fuel Standard, which requires increasingly stringent road transport fuel GHG intensity (gCO_2e/MJ fuel) reductions from 2011 through 2020. The adopted 2020 goal would require an average 10% reduction by 2020.	**23** $MtCO_2e$ in 2020 [a]	Technical Policy Update
The **US** revised the biofuel volume requirements and established new eligible low-carbon fuel pathways in its Renewable Fuel Standard.	**138** $MtCO_2e$ in 2022 [b]	Technical Policy Update
The **EU** proposed revisions for GHG accounting and added incentives for cellulosic biofuels in its Fuel Quality Directive, which would reduce road transport fuel carbon intensity 6% by 2020. Additionally, the EU proposed caps for particular fuel types in its Renewable Energy Directive, which would bring 10% renewable energy content to the road transport fuel pool.	**62** $MtCO_2$/yr in 2020	Technical Policy update
TOTAL	**223 $MtCO_2$**	

Implemented Adopted Proposed Delayed implementation

[a] *CARB (2009)*

[b] *US EPA (2010)*

c *Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014)*

We note that there are a number of other fuel-carbon-related policies that are actively being developed, revised, and implemented. Most prominently, the EU's Fuel Quality Directive (FQD) and Renewable Energy Directive (RED) would require that road transport fuel GHG intensity be reduced by 6% (up to 10%) and that transport is 10% fueled by renewable sources by 2020 (European Union, 2009a; European Union, 2009b). The EU's FQD has seen a number of proposed revisions, including related to its inclusion of indirect land use change in the lifecycle GHG accounting and the capping of food and feed-based fuels (Malins and Searle, 2012; Malins, 2014). There are also a number of underlying efforts in EU member states, Canadian provinces, and other US states. Also note that there are other biofuel targets and policies – that are without specific GHG reduction criteria – that are also being implemented, and these are discussed further in Section 3.3.

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CHAPTER 3. IMPACT ASSESSMENT OF CLEAN TRANSPORT POLICIES

This chapter provides additional background on regulations in each transport sub-sector, compares regulatory progress among top vehicle markets, and importantly quantitatively assesses the impacts of adopted and potential policies on climate, energy, emissions, and health. Although there are no regulatory updates in international aviation from January 2013 through July 2014, this chapter includes upcoming regulatory opportunities for a global CO_2 standard and market-based measures.

3.1. Energy consumption of light-duty vehicles

Fuel efficiency and GHG standards for light-duty vehicles (LDVs) have a strong record of success in reducing fuel consumption and GHG emissions of passenger cars, light trucks, and sport utility vehicles (SUVs). Fuel economy regulations were first implemented in the US in the 1970s to reduce vulnerability to the price volatility of oil imports. After initial gains, LDV efficiency in the US stalled as technology improvements were offset by increases in vehicle size and performance. Other regions such as Japan and Europe pursued a combination of high fuel taxes and fiscal measures to encourage the sale of more efficient vehicles. In recent years, many of the largest markets have adopted or implemented mandatory fuel efficiency and GHG standards to ensure that new vehicle fleets become progressively more efficient and utilize available and emerging cost-effective technologies.

Context

Most of the world's top vehicle markets have adopted regulations requiring vehicle manufacturers to improve the energy efficiency of new passenger vehicles, or LDVs. Such standards set targets for new vehicle fleets based on CO_2, GHG emissions, fuel consumption, or fuel economy (see Box 4); these vehicle efficiency standards are differentiated from vehicle emission standards, which limit emissions of local air pollutants from vehicles.

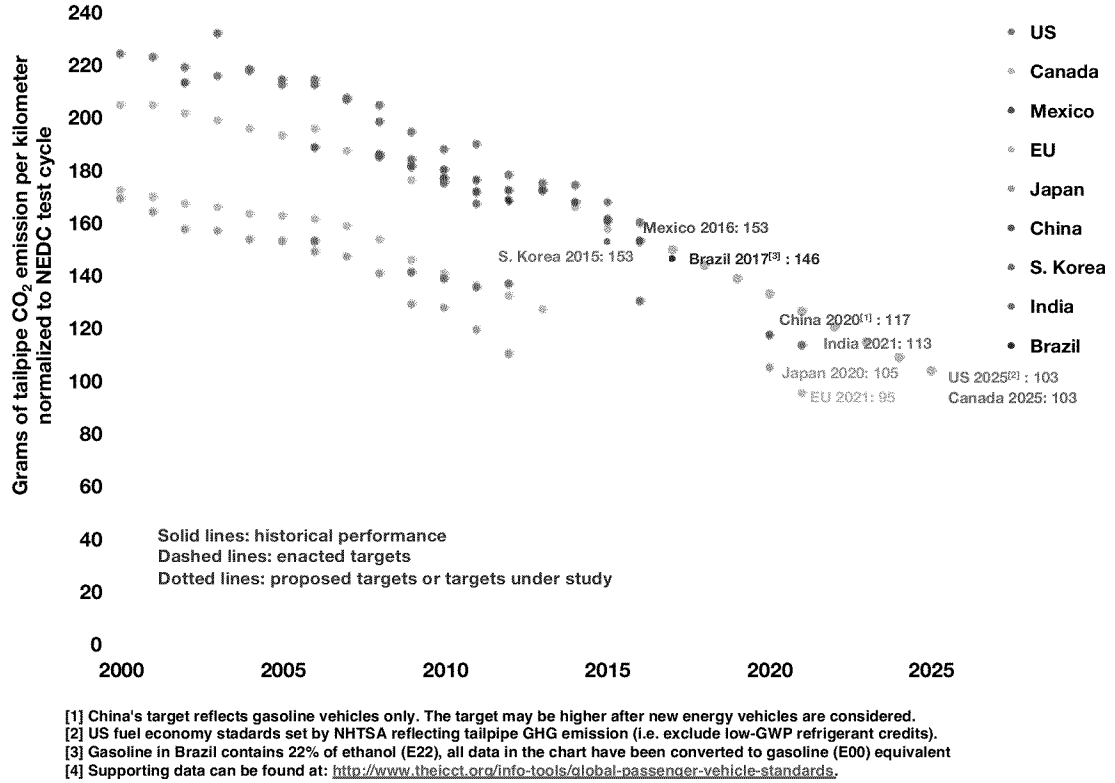
Efficiency standards for LDVs have proven to be a highly cost-effective means of cutting CO_2 emissions: recent regulations in the US, EU, and China have resulted in fuel savings that pay off the incremental vehicle costs within one to five years (Federal Register, 2010; Façanha et al., 2012). The ICCT compares corporate average vehicle efficiency requirements for the new fleet across countries that have adopted efficiency standards or comparable fiscal instruments (Figure 4 & Figure 5). We also note that North American standards include passenger cars, light trucks, and sport utility

Box 4. Metrics for vehicle efficiency and GHG standards

Depending on the regulatory authority and objectives of the standard-setting agency, some regulations set targets for fuel consumption (e.g. MJ/km, L/100km) or fuel economy (e.g. mpg, km/L), while others directly target CO_2 or GHG emissions (grams CO_2/km, grams CO_2e/mile); still others include targets for both. For ease of comparison, these policies are collectively referred to as "efficiency standards" throughout this report.

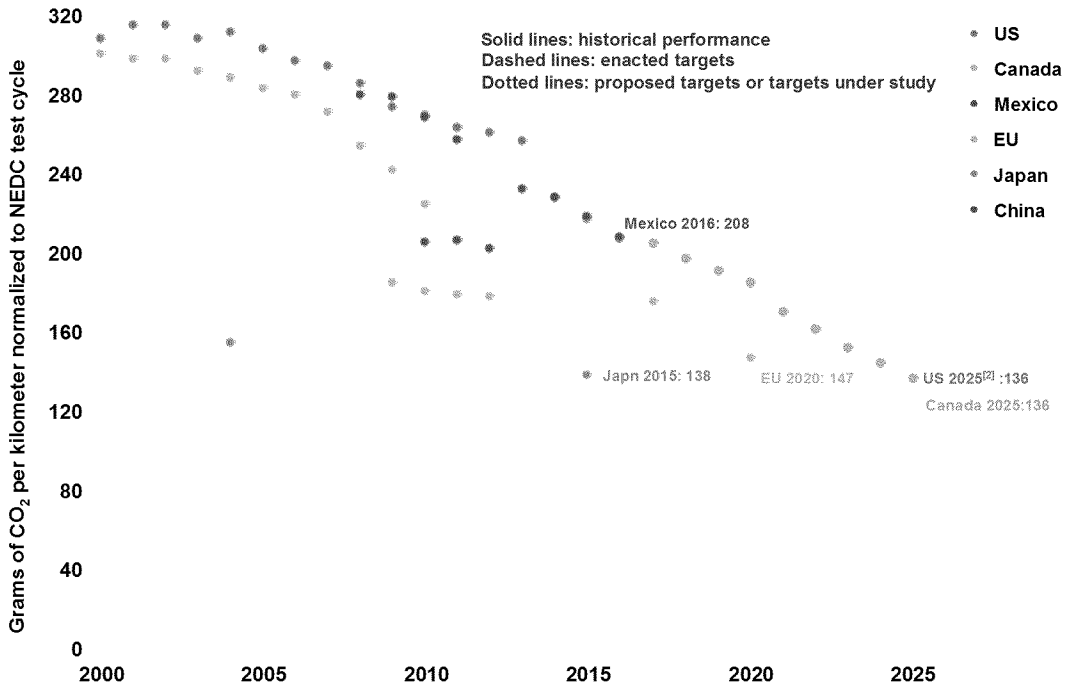
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vehicles, while the EU addresses passenger cars and vans (LCVs) in separate regulations. To date, the US has adopted the longest regulatory timeline for LDV GHG standards out to 2025, and Canada is expected to harmonize with the US regulations. For China, the EU, Japan, and India, the stringency of standards for the 2021-2025 period could determine the global leader in passenger vehicle efficiency. In Brazil, South Korea, and Mexico, the next several years are a critical period to determine whether these will keep pace with other top vehicle markets.



[1] China's target reflects gasoline vehicles only. The target may be higher after new energy vehicles are considered.
[2] US fuel economy stadards set by NHTSA reflecting tailpipe GHG emission (i.e. exclude low-GWP refrigerant credits).
[3] Gasoline in Brazil contains 22% of ethanol (E22), all data in the chart have been converted to gasoline (E00) equivalent
[4] Supporting data can be found at: http://www.theicct.org/info-tools/global-passenger-vehicle-standards.

Figure 4. Global comparison of passenger car efficiency standards (He & Yang, 2014c)

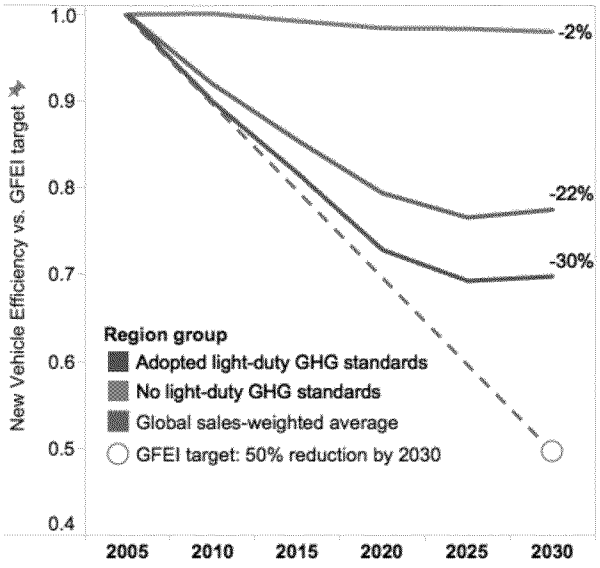


[1] China's target re□ects gasoline vehicles only. The target may be higher after new energy vehicles are considered. !
[2] US standards GHG standards set by EPA, which is slightly different from fuel economy stadards due to low-GWP refrigerant credits.!
[3] Supporting data can be found at: http://www.theicct.org/info-tools/global-passenger-vehicle-standards.!
!

Figure 5. Global comparison of light commercial vehicle efficiency standards (He & Yang, 2014c)

Outlook and projections

Recent progress in light-duty efficiency regulations highlights the potential for further improvements in these regions, and further expansion to growing vehicle markets. The ICCT is a partner of the Global Fuel Economy Initiat ive (GFEI), a consortium that aims to halve the fuel consumption of new LDVs from 2005 to 2030 by strengthening and expanding the adoption of LDV efficiency standards (GFEI, 2014). Figure 6 compares progress under LDV efficiency standards adopted to date with the 2030 GFEI target. Some countries are on track to meet GFEI targets based on their adopted standards: the US 2017-2025 rule is expected to achieve this target five years early; Japan and the EU could achieve the GFEI target with the adoption of 2025 standards. China's adopted Phase 3 standards will achieve about one-third of the targeted improvements; while Phase 4 will push progress further, follow -up 2025 standards are needed to reach the GFEI target. Mexico and Canada could get close to the GFEI target by harmonizing with the US through 2025; similarly, South Korea and Brazil would have to move relatively quickly to meet the target, likely with two phases of standards. Russia and Australia have yet to adopt efficiency standards and will likely need several consecutive phases of standards to reach the GFEI target. Most countries outside of the selected markets have yet to adopt such standards; developing standards in these growing markets should be a priority alongside working on the next phases of standards in developed markets.



		2030	
		% of total sales	% reduction in new vehicle fuel consumption (2005 baseline)
Adopted light-duty GHG standards	China	**26%**	**-15%**
	EU-28	**15%**	**-40%**
	U.S.	**15%**	**-50%**
	India	8%	-26%
	Japan	3%	-38%
	Brazil	3%	-12%
	Canada	2%	-24%
	Mexico	2%	-19%
	South Korea	1%	-24%
	Average	**76%**	**-30%**
No light-duty GHG standards	Russia	4%	0%
	Australia	1%	-9%
	Other countries	**19%**	**-1%**
	Average	**24%**	**-2%**
Global Average		**100%**	**-22%**

Figure 6. Progress of new light-duty vehicle efficiency toward the 2030 GFEI target

Sales-weighted averages include projected sales of passenger cars and light commercial vehicles through 2030.

Figure 7 compares projected LDV CO_2 emissions under three scenarios. Compared to business-as-usual trends, standards adopted to date will reduce annual lifecycle emissions by 1.5 $GtCO_2$, equivalent to 7.4 mbd, in 2030. Going further, meeting GFEI targets could largely stabilize global CO_2 emissions from LDVs from 2020 on despite rapid growth in vehicle activity, cutting emissions by an additional 0.95 $GtCO_2$ annually by 2030. Assuming that there are minimal net changes to the global lifecycle carbon intensity of fuel over this time, efficiency standards that achieve GFEI targets would cut fuel consumption in 2030 by 4.9 mbd from fuel consumption with adopted policies.

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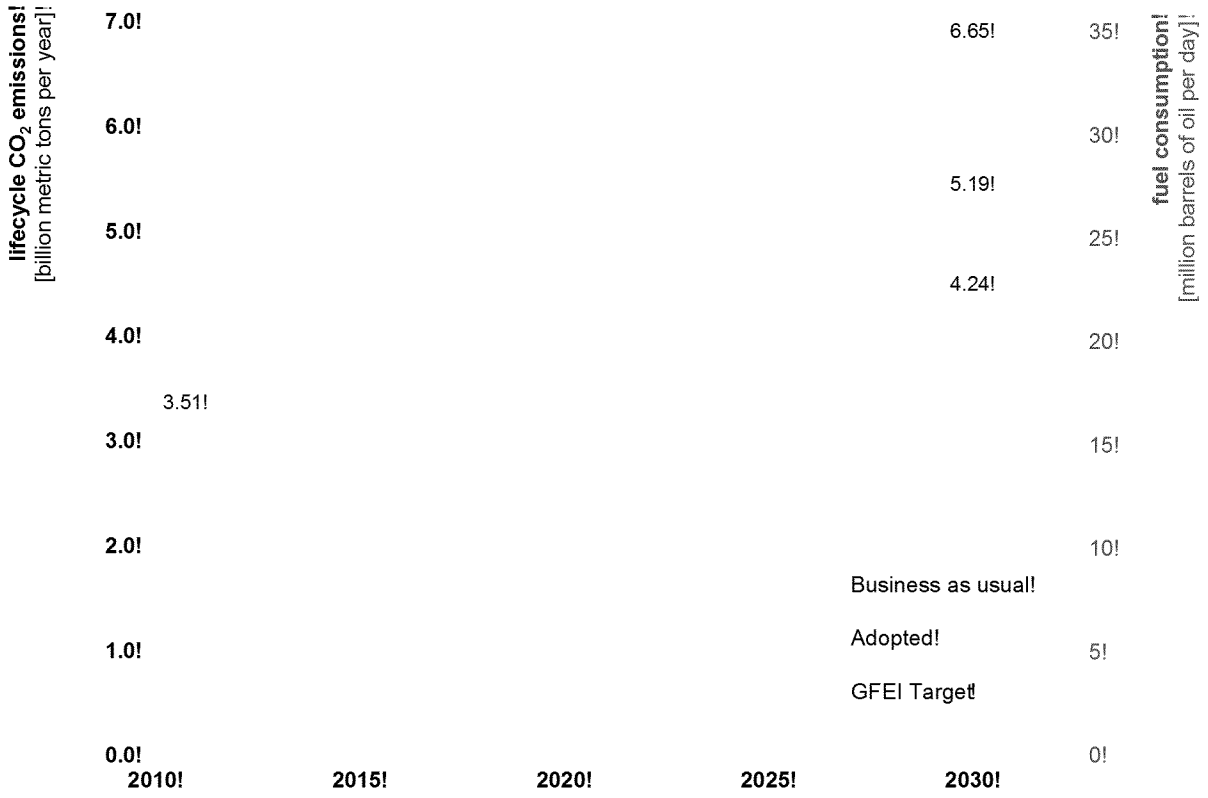


Figure 7. Impact of light-duty efficiency standards on global lifecycle CO_2 emissions

Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014). ***Business as usual*** *= vehicle efficiency remains at 2005 levels.* ***Adopted*** *= currently adopted policies.* ***GFEI Target*** *= countries adopt standards that reduce average fuel consumption of new vehicles to 50% below 2005 levels by 2030 (GFEI, 2014).*

Electric-drive vehicles

As vehicle emissions and efficiency and GHG standards become increasingly stringent, they help to encourage the integration of advanced technologies, lightweight materials, and zero-tailpipe emission electric-drive technologies. Electric-drive vehicles, including plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), and fuel cell electric vehicles (FCEVs), are becoming increasingly competitive with conventional internal combustion engines with respect to range, performance, and cost. Electric vehicles still account for a small share of overall passenger car sales – less than one percent in most of the top vehicle markets in 2013, with higher shares in the US (1.3% nationwide, and 4% in California), the Netherlands (5.6%) and Norway (6.1%) (Mock & Yang, 2014). However, there has been rapid growth in the number of models available, for example from nine in 2012 to seventeen in 2013 in the US (InsideEVs, 2014). Moreover, total sales of BEVs and PHEVs have exploded since 2009, doubling year-over-year from 2011 to 2012, and again from 2012 to 2013 (Figure 8) (Mock and Yang, 2014). While the bulk of these sales have occurred in the US, EU, Japan, and China, numerous regions have adopted tax exemptions, direct subsidies, and other non-fiscal incentives to encourage the sale of electric-drive vehicles. Besides different forms of incentives, perhaps the most significant electric-drive vehicle policy to date is California's Zero Emission Vehicle (ZEV) mandate, which requires manufacturers to meet an increasing share of vehicle sales with

PHEV, BEV, and FCEV technologies. As a result of the ZEV mandate electric-drive vehicles are forecast by CARB analysts to account for 15% of model year 2025 vehicles sold in California (CARB, 2012). In addition to direct incentives, many adopted efficiency standards provide credits to accelerate the development and commercialization of advanced technologies, including electric-drive vehicles. These vehicles will become increasingly important to achieve long-term decarbonization of on-road transport; as such, achieving this potential will benefit from early policy action on multiple fronts, including light-duty efficiency standards, direct incentives, and supporting infrastructure investments.

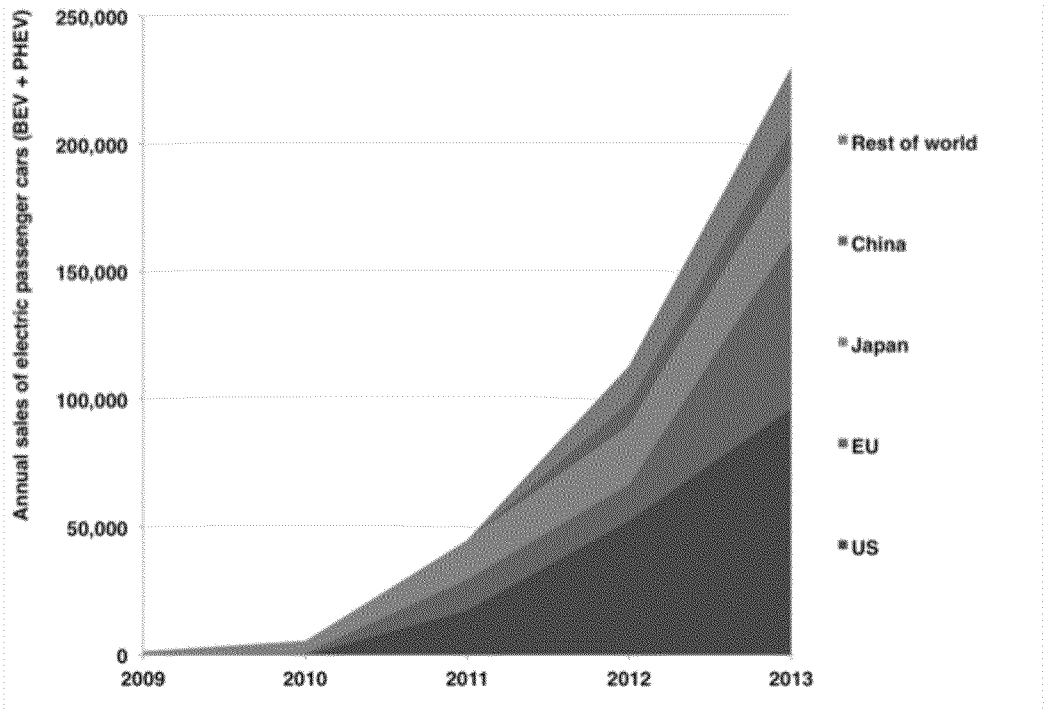


Figure 8. Annual global sales of electric passenger cars, 2009-2013 (Mock & Yang, 2014)

3.2. Energy consumption of heavy-duty vehicles

Heavy-duty vehicles (HDVs) encompass a wide range of vehicle types, including large pickups, delivery trucks, long-haul tractors, refuse trucks, urban buses, and coaches. The diversity of heavy-duty fleets – both in vehicle characteristics and duty cycles – makes regulating their fuel consumption and GHG emissions more challenging than for LDVs. Key components of HDV regulations include the metric for efficiency or GHG emissions, vehicle types covered (segmentation), test methods for certification, and means of enforcement.

Context

To date, only four markets have adopted national efficiency regulations for heavy-duty trucks and buses (Japan, the US, Canada, and China). The first HDV GHG regulations in the US and Canada are just now coming into effect. And while Japan adopted its Phase 1 standard as early as 2005, it will not become fully enforceable until 2015, the same year as China's recently

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adopted Phase 2 regulation. In addition to regulations for new vehicles, California requires in-use long-haul tractors and box-type trailers – the highest fuel-consuming segment of heavy-duty trucks – to retrofit or replace affected vehicles with certified aerodynamic technologies and low rolling resistance tires.

Studies by the National Academy of Sciences (2010) and TIAX (2009) for the US market and AEA-Ricardo (2011) and TIAX (Law et al., 2011) for the European market have found a technical potential to reduce the fuel consumption of most types of HDVs by 40% to 50%from 2009 to 2020. A comparison of the estimated reductions in fuel consumption indicates that Japan, China, the US, and Canada will capture roughly a third of this potential by 2020 with adopted regulations (Figure 9).

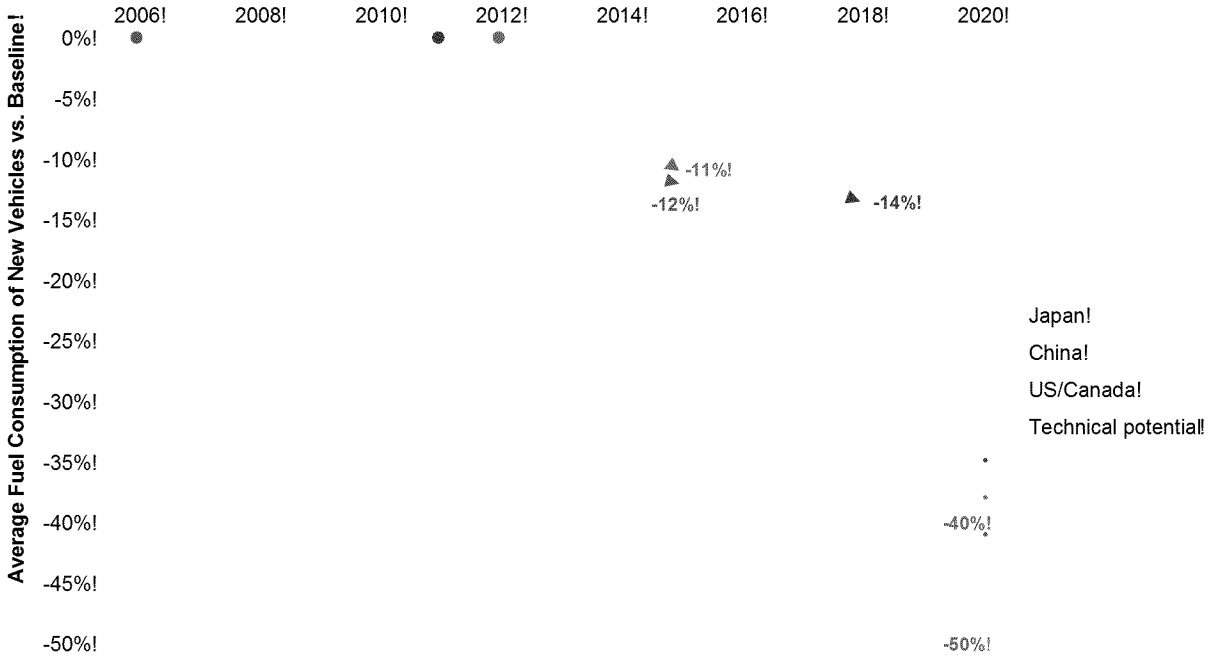


Figure 9. Global comparison of heavy-duty vehicle fuel consumption and GHG standards

Annual reduction in fuel use estimated fromvehicle activity-weighted fleet averageover the duration of the regulation. Improvements shown beginning in year enacted.

Outlook and projections

Additional heavy-duty efficiency regulations are under consideration in major markets around the world. Beyond the existing four regulated markets (i.e., Japan, US, Canada, and China) there is also activity toward HDV efficiency standards in the EU, South Korea, and Mexico. In North America, the US and Canada have begun work on Phase 2 efficiency standards, which are anticipated to apply to new 2019 and later models (Lutsey, 2014). While Mexico has harmonized with US light-duty standards with a delay of several years, a recent tripartite commitment with the US and Canada shows promise for harmonization of heavy-duty efficiency and emissions regulations (Blumberg, 2014). China is also working toward its next phase of

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standards for 2020 and later HDVs. These markets (China, the US, the EU, Japan, Canada, South Korea, and Mexico) accounted for over two-thirds of global heavy-duty freight activity (tonne-km) and energy use in 2010 (ICCT, 2014). In addition, a number of countries around the world are also investigating voluntary green freight programs that would provide in-use fleet efficiency improvements and could serve as building blocks toward future efficiency standards.[2] The policies which are currently under discussion could result in significant fuel savings to owners and operators; while payback periods vary by regulatory design, vehicle type, and region-specific activity patterns, HDV standards in this timeframe typically have payback periods of one to four years.

Figure 10 compares projected CO_2 emissions from the global HDV fleet under three scenarios. Adopted policies, along with slight gains in global efficiency since 2005, are forecast to reduce emissions by 0.31 $GtCO_2$ by 2030, equivalent to 1.5 mbd, as compared to business-as-usual trends in the absence of standards. However, if vehicle activity of buses and trucks continues to grow according to recent trends, HDV efficiency would need to improve at a faster rate going forward to stabilize GHGs and fuel consumption. The *Technical Potential* trajectory assumes that new HDV standards improve fuel consumption by 3.5% annually starting in 2020 in the selected vehicle markets, and 2025 in the rest of the world. This level of progress could curb growth in global HDV emissions over the next 15 years and save an estimated 0.59 $GtCO_2$ annually in 2030, equivalent to 2.8 mbd.

[2] Green freight programs are voluntary initiatives that encourage the introduction of efficiency technology and implementation of operational measures to improve truck efficien cy.

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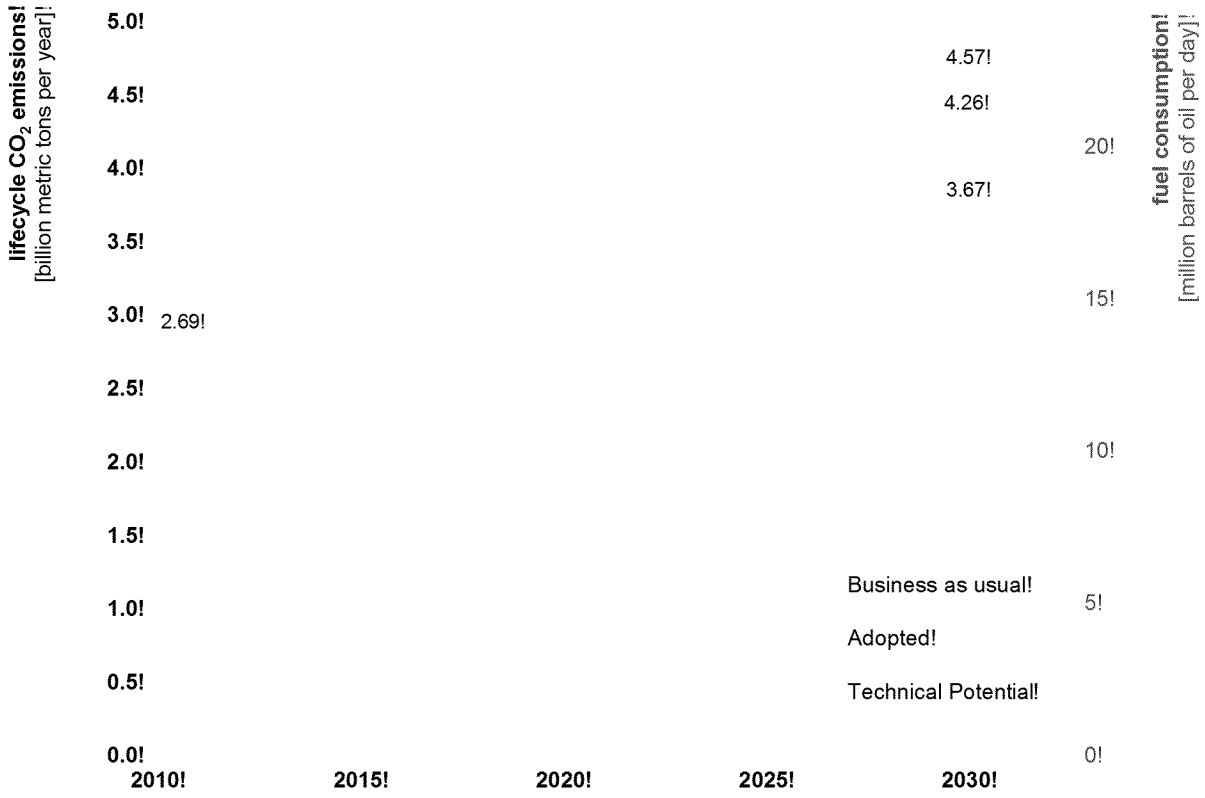


Figure 10. Impact of heavy-duty efficiency standards on global CO_2 emissions

Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014). ***Business as usual*** *= vehicle efficiency remains at 2005 levels.* ***Adopted*** *= currently adopted policies.* ***Technical Potential*** *= new HDV standards improve fuel consumption by 3.5% annually starting in 2020 in eleven of the top vehicle markets, and 2025 in the rest of the world.*

3.3. Carbon intensity of on-road fuels

Since the mid 2000s, a number of governments have aimed new policies at promoting alternative fuels in the transport sector. Prominent alternative transport fuel sources that governments are encouraging to support their climate mitigation goals include biofuels, lower carbon fossil fuels (e.g., natural gas), and electricity. These policies tend to have a number of objectives, including to increase fuel diversity in the transport sector by displacing oil usage, to reduce the lifecycle carbon intensity of transport fuels, and to increase agricultural economic development. This section considers use of alternative transport fuel policy to reduce lifecycle GHG emissions.

Context

Table 9 summarizes major efforts over the last ten years to promote alternative fuels. By and large these policy goals are stated in the form of volumetric biofuel targets, with smaller targets of 0.1-1.0 billion gallons per year in countries like Japan and Australia and up to 36 billion gallons per year in the US in 2022. The policies in the US (including California) and the EU include specific regulatory GHG emission and fuel requirements for fuel providers to

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increasingly mix lower-carbon fuels, including low-GHG biofuels, renewable natural gas, and renewable electricity, into the transport fuel supply.

Table 9. Summary of policies to promote alternative fuels in transport

	Policy name	Biofuel-related targets
EU	Renewable Energy Directive (RED)	10% renewable energy in transport by 2020
	Fuel Quality Directive (FQD)	6% reduction in fuel GHG intensity by 2020
US	Renewable Fuel Standard (RFS)	36 billion gallon/year of biofuels by 2022
California	Low Carbon Fuel Standard (LCFS)	10% reduction in fuel GHG intensity by 2020
China	National Plan	4 billion gal/year by 2020, E10 in 10 provinces.
India	National Policy on Biofuels	Increasing to 20% by 2017.
Canada	Renewable Fuel Standard	5% ethanol in 2010 gasoline, 2% biodiesel 2012
Mexico	Law for the promotion and development of bioenergy	2% biofuel usage in selected areas (Guadalajara, Monterrey, Mexico City) by 2011-2012
Japan	Biomass Nippon Strategy	1 billion gal/year by 2030
Australia	Energy Grants Scheme; Ethanol Production Grants	0.1 billion gal/year biofuels by 2010
Brazil	Mandatory Biodiesel Requirement; Ethanol fuel program	5% biodiesel by 2010; 25% ethanol by 2007

Source: Malins et al. (forthcoming). "E10" = 10% ethanol, 90% gasoline

As indicated above, many countries have now established targets for increased biofuel deployment for future years. From a GHG mitigation perspective, the most significant of these global alternative fuel policy efforts are those in the US and EU. In the US, there are two major alternative fuel policies that require accounting of, and reduction in, transport fuels' lifecycle carbon intensity. The national US Renewable Fuel Standard (RFS) provides specific minimum lifecycle GHG-reduction requirements for biofuels within several different biofuel categories. The California's Low Carbon Fuel Standard goes further, placing specific fuel carbon ratings on all distinct biofuels, and using an increasingly stringent performance standard to reduce the average lifecycle carbon intensity of all on-road transport fuels sold in California through 2020. The EU's Fuel Quality Directive (FQD) similarly utilizes a performance standard to require a reduction in the average on-road fuel supply's greenhouse gas intensity. The EU, US, and California policies have moved toward greater rigor, analysis of more fuel pathways, and comprehensive lifecycle accounting of land use effects to better differentiate the sustainable fuels that are reliably low carbon. Although not listed in the table, a number of EU member states (e.g., Germany, United Kingdom) are developing programs within the EU directive

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framework. In addition, several Canadian provinces (e.g., British Columbia) and other US states (e.g., Oregon) also are developing and implementing biofuel and low-carbon fuel policies.

Outlook and projections

As indicated above in Chapter 2, the EU, US and California are still actively developing their policies, addressing key challenges related to how they promote various fuels (biofuel, fossil fuel, and electric-drive fuel sources). Critical attributes of these EU and California policies include their ability to account for, monitor, and incent improved actions with respect to the lifecycle emissions of fossil fuels. For example, one key determinant is if and how the regulations account for, and discourage deployment and investment in, fuels with *higher* upstream carbon emissions, like Canadian tar sands and Venezuelan heavy oils, that can have 15-20% or greater GHG emission than conventional crude oil. Fuel policy that clearly disincentivizes the use of high-carbon fossil fuels for transport are lacking, with the possible exception of California's LCFS.

Another important factor in these fuel carbon policies is whether and how the regulations can increasingly promote only fuels with reliably low lifecycle carbon, low indirect land use, and minimal food system interaction For example, most of the biofuel policies are driving conventional biofuels (i.e., from corn, soy, wheat, and rapeseed) with relatively high GHG emissions. On the other hand, recent EU-based findings indicate that up to 16% of road transport fuel could be derived from low-carbon waste-based sources by 2030 (Harrison et al., 2014). This could be indicative of how fuels policy can shift from older conventional food-based feedstocks toward lower land-intensity and lower-carbon feedstocks.

As indicated above, California and the EU each continue to evaluate and revise their detailed provisions to strengthen their policies toward reducing fuel carbon intensity by 10% and 6%, respectively, in the 2020 timeframe. As a result of the relatively early and somewhat "in flux" nature of global low-carbon policies, we assess only rather limited scenarios for the potential GHG reductions that would result from such policies. With respect to adopted policies, California's and EU's low-carbon fuel policies are intended to reduce fuel carbon intensity by 10% and 6%, respectively, in the 2020 timeframe. The technical potential scenario considers the global implementation of low-carbon fuel policies that result in a 10% reduction in the lifecycle GHG intensity of on-road fuels that is phased in from 2020-2030. This potential represents a simplistic extrapolation of the California and EU-style objectives and would require technology breakthroughs in the use of advanced low-carbon fuels and electric drive vehicles. Over the long-term, developing low-carbon fuel policies to especially promote electric drive, powered by de-carbonized electricity (and hydrogen), will be a key long-term climate stabilization goal for the transport sector.

3.4. Energy consumption of international marine vessels

Rapid growth in the demand for global goods movement has resulted in a doubling of CO_2 from international shipping from 1990 to 2007, and today marine accounts for 1 $GtCO_2$ each year, the

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equivalent of 11% of CO_2 emissions from transport (Wang & Lutsey, 2013). In the absence of actions to limit international marine GHG emissions, emissions could increase by two-thirds by 2030. Since 1997, the Marine Environmental Protection Committee (MEPC) of the International Maritime Organization (IMO) has held the responsibility to regulate emissions from international marine vessels.

Context

In 2011, the MEPC adopted the Energy Efficient Design Index (EEDI), the first regulation to establish CO_2 standards across a global sector. The initial regulation applied to all new cargo ships weighing more than 400 gross tons, which account for 72% of CO_2 emissions from newly built ships (Hon & Wang, 2011), with additional ship types being added over time. The EEDI will improve the efficiency of new ships by 10% in 2015, 20% in 2020, and 30% in 2025, from a baseline representing the average efficiency for ships built between 2000 and 2010, and is expected to prevent the release of more than 340 $MtCO_2$ each year by 2030 (Wang & Lutsey, 2013).

In addition, implemented concurrently with the EEDI, the Ship Energy Efficiency Management Plan (SEEMP) establishes mechanisms for companies and operators to improve the efficiency of ship operations. The IMO establishes guidelines for planning, implementing, and monitoring best-practice efficiency strategies for in-use ships. These guidelines lay the foundation for future measures to improve operational eficiency, including a potential efficiency standard for in-use ships. The importance of in-use efficiency is augmented by the long lifetimes of marine vessels and wide variation of in-use performance across similar vessels. Figure 11 shows the variation in technical design CO_2 intensity (how ships are designed to perform) and in -use CO_2 intensity (how ships actually operate) within the international container shipping fleet in 2011. The EEDI will improve the technical design emissions of newly built ships, and in-use measures such as SEEMP and MBMs will improve the operations of existing ships.

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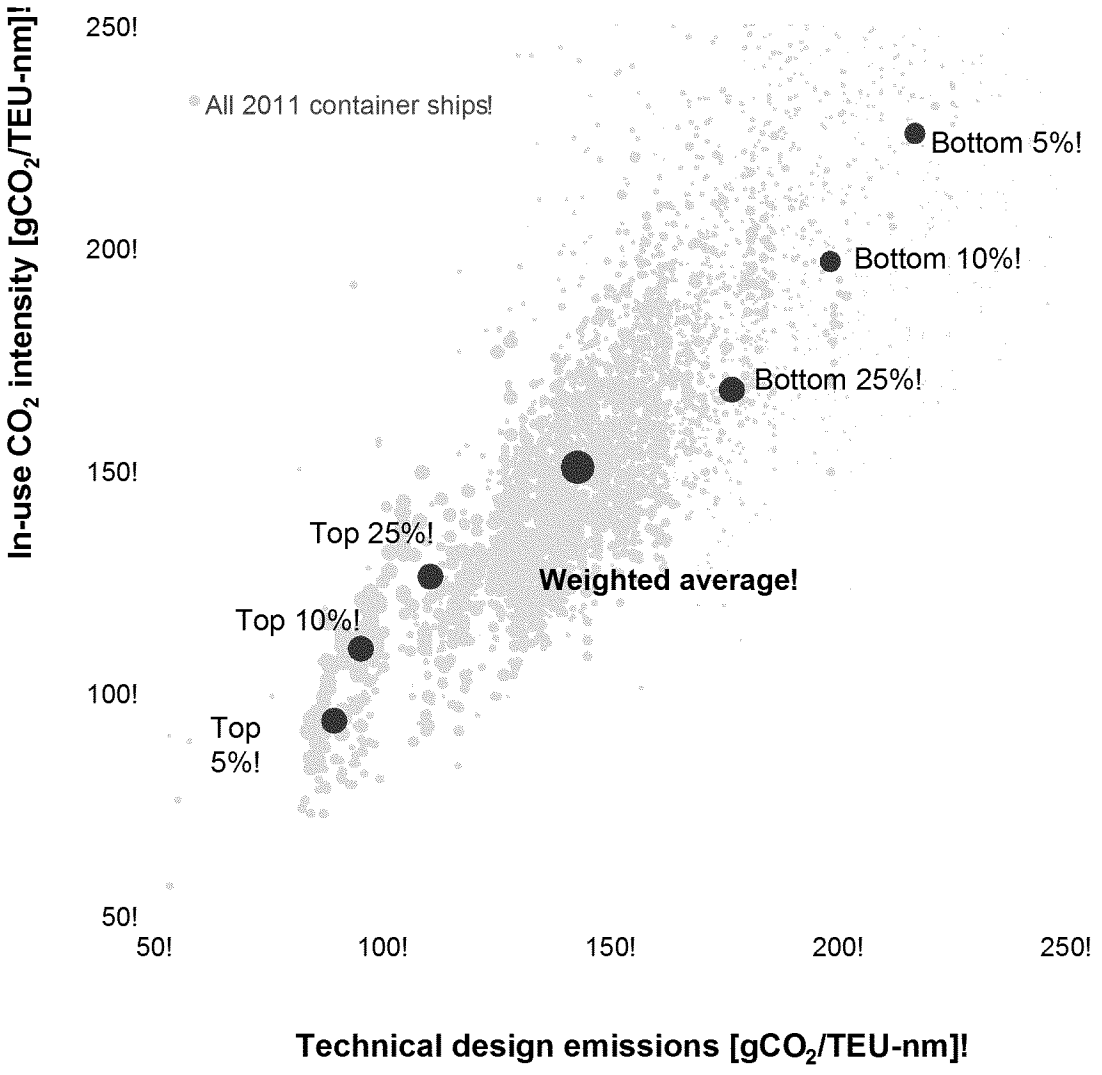


Figure 11. Technical and in-use CO_2 from 2011 containerships (Wang & Lutsey, 2013)

TEU-nm refers to a 20-foot equivalent unit, a measure based on the cargo capacity of a 20 -foot-long intermodal shipping container.

Recognizing the importance of measures to boost in-use ship efficiency, the IMO began discussing monitoring, reporting, and verification (MRV) provisions leading to mandatory in -use efficiency requirements at the 2011 MEPC meeting, with support building from key nations and industry at each subsequent meeting. Most recently, at the April 2014 MEPC meeting, a formal working group was formed to deliberate on the issue. The working group, which held constructive discussions at that meeting with minimal resistance from industry, will continue to work as an inter-sessional correspondence group through 2014.

Outlook and projections

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Table 10 provides background on major regulatory developments within the IMO toward improving marine efficiency. These developments cover formal invitations to regulate harmful pollutants, major technical studies, adoption, and implementation of policies. Established implementation dates are also included beyond 2014. As shown, the critical benchmarks for increased new ship efficiency are 2015 (10% increased efficiency), 2020 (20%), and 2025 (30%).

Table 10. Timeline of regulatory developments for marine efficiency within the IMO

Year	Regulatory Development
1997	MARPOL invites MEPC to consider feasible CO_2 reductions for ships
2000	First IMO study on GHG emissions from ships
2003	IMO urges MEPC to develop mechanisms to limit GHG emissions
2009	MEPC finalizes a suite of technical and operational GHG reduction measures
2010	MEPC considers mandating technical and operational measures irrespective of flag and ownership
2011	First ever mandatory GHG reduction regime for an entire industry, including technical (EEDI) and operational (SEEMP) measures
2013	EEDI and SEEMP enter into force for all ships over 400 gross tonnage
2015	New ships must be **10%** more energy efficient (EEDI)
2020	New ships must be **20%** more energy efficient (EEDI)
2025	New ships must be **30%** more energy efficient (EEDI)

In addition, there is the potential for much greater climate mitigation from IMO policies that promote efficient shipping technologies and practices. Figure 12 shows projected CO_2 emissions from international shipping under three scenarios (based on Wang & Lutsey, 2013). The first two scenarios compare shipping emissions with and without the EEDI standards that are now being implemented. The third scenario investigates the effect of technology-focused measures beyond EEDI that improve the efficiency of new ships 1.5% per year from 2025 on, combined with operational measures that improve in-use efficiency 1% per year starting in 2015. The results indicate that by 2030, the successful implementation of the EEDI will cut lifecycle CO_2 emissions by an estimated 0.34 $GtCO_2$ per year. Expanded policy progress to improve shipping technology and operations could stabilize shipping emissions at 2010 levels despite a significant increase in the demand for global goods transport.

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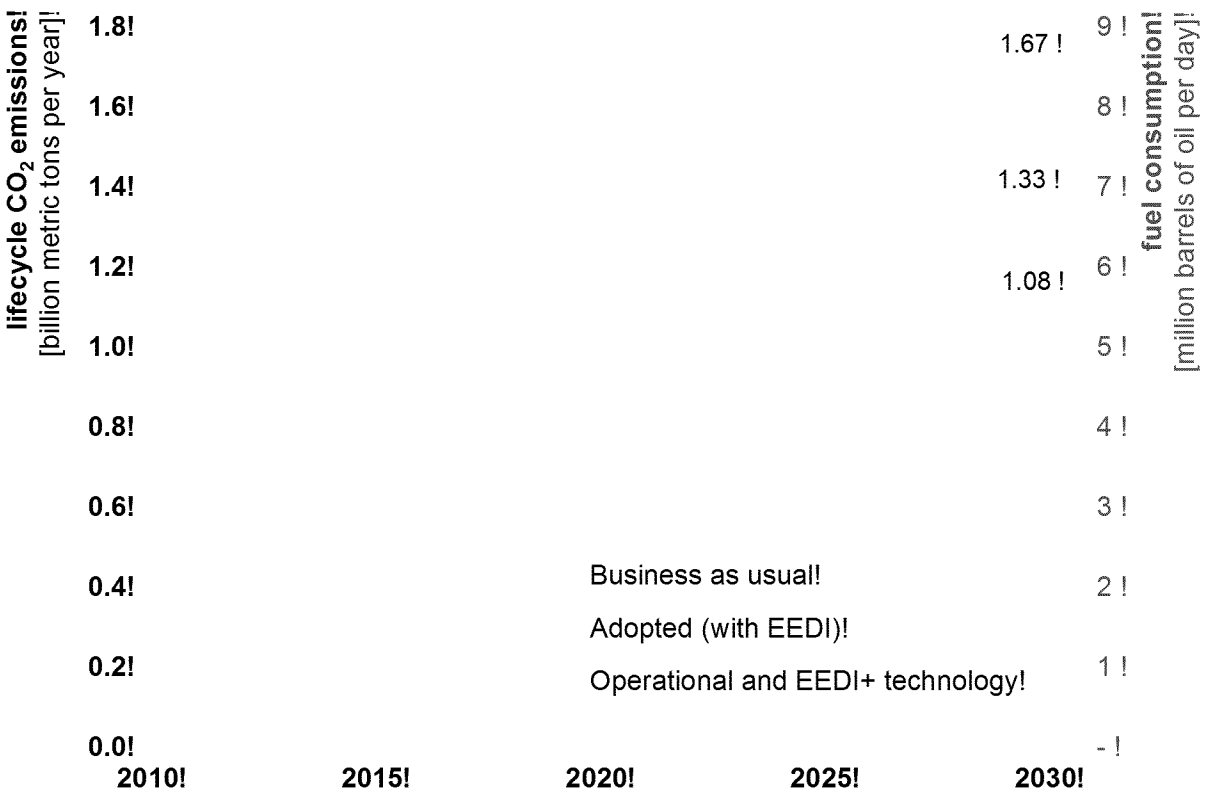


Figure 12. Shipping fleet CO_2 emissions with EEDI and improved technology and practices for in-use ship efficiency (Based on Wang & Lutsey, 2013)

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3.5. Energy consumption of international aviation

After rapid gains in fuel efficiency from 1960 to 1990, the average fuel efficiency of new aircraft since 1990 has only improved by roughly 10% (Figure 13); over this same period, aviation activity for both passenger travel (measured in seat-km) and freight transport (measured in ton-km) grew by roughly a factor of 2.5. Since 2000, aviation activity has continued to grow, but the efficiency of new aircraft has stagnated, resulting in a 3% to 4% annual increase of aviation greenhouse gas emissions. Aviation accounts for about 11% of CO_2 emissions from transport (Façanha et al., 2012). If trends continue, aviation CO_2 emissions could double by 2030.

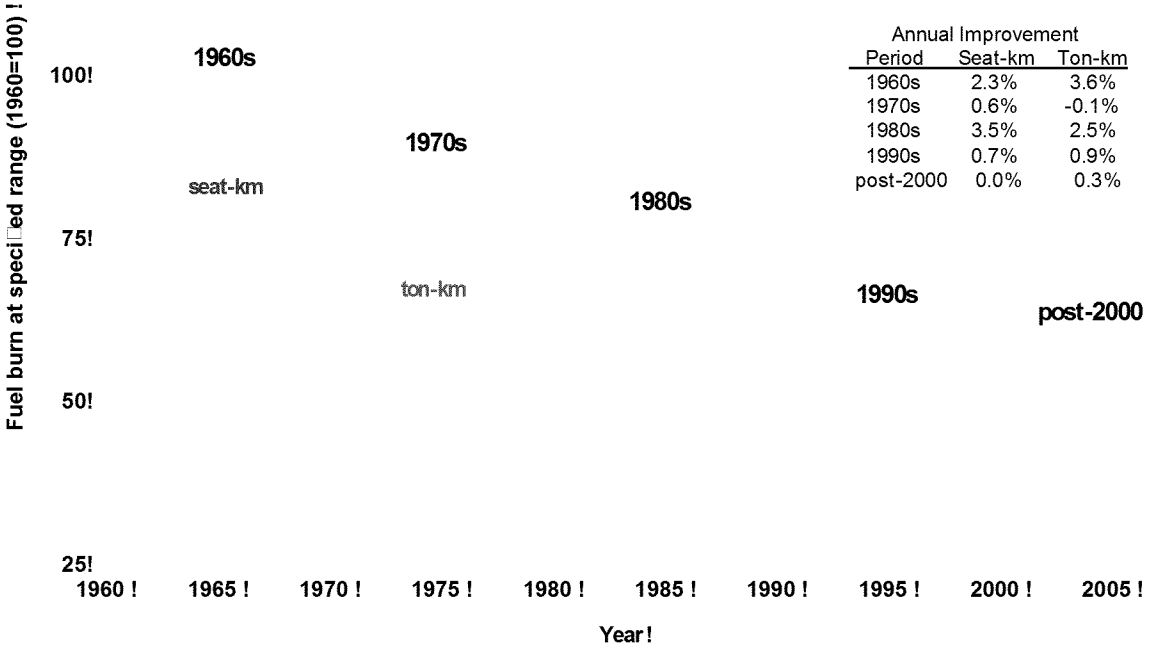


Figure 13. Average fuel burn for new aircraft, 1960-2008 (Rutherford & Zeinali, 2009)

Context

In October 2010 the International Civil Aviation Organization (ICAO) established a 2% annual fuel efficiency goal (aspirational from 2020 to 2050) along with the target of carbon neutral growth from 2020 (Hupe, 2011). Other regions, notably the EU, support even more aggressive goals (10% below 2005 levels by 2020) and have adopted regional measures consistent with these goals. Between 1991 and 2009, international aviation fleetwide fuel intensity fell by 2.5% annually on a tonne-kilometer basis, while aviation demand grew by 4.2% annually (World Bank, 2014). Coordinated, near-term international policy action will be needed if ICAO's goals are to be met by 2020.

Outlook

In 1997 ICAO was given responsibility for regulating international aviation emissions under the Kyoto Protocol. ICAO began the scoping process for a global CO_2 standard for new aircraft in 2009 and committed to developing such a standard in 2010; however, progress has been slow, and ICAO is now expected to deliver a standard by 2016. As of April 2014, ICAO has not yet

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determined whether to cover newly delivered aircraft that have already received type certificates – called "new in-production aircraft" – in addition to new "clean sheet" designs. ICAO is still determining the stringency of such a standard, which will be a key contributor to meeting ICAO's goal of 2% annual improvements in aircraft fleet efficiency through 2050.

In addition to a CO_2 standard, which would only affect newly delivered aircraft, ICAO member states have been working towards developing a framework since 2010 for a market-based measure (MBM) for international aviation. In 2012, in the absence of global action toward market-based measures, the EU decided to include international aviation in its Emissions Trading Scheme (ETS), sparking opposition from other ICAO member states to the EU's unilateral action. In response, the EU agreed to postpone the inclusion of international aviation in its ETS until 2017 to allow time for ICAO to agree on a global MBM framework. In 2013, ICAO agreed to develop a global MBM and come up with a proposal for a global MBM scheme by 2016 for implementation by 2020 (ICAO, 2013). Simultaneously, the US EPA is required to soon determine whether GHG emissions from aircraft endanger human health and welfare, and whether these should therefore be subject to regulations under the Clean Air Act.

ICAO is currently developing a framework that would provide guidelines for implementation of regional MBMs. However, such a framework could only account for a limited number of emissions (i.e. that occurring in the sovereign airspace), estimated to be up to 22% of sector total (Lee et al., 2009). The global MBM scheme for international aviation under development would replace regional approaches like the EU Emissions Trading Scheme (ETS) and capture a greater share of global aviation emissions; however, if ICAO cannot come to an agreement on global measures to limit aviation emissions scheme, regional actions may proceed within the EU and the US.

In addition to efforts toward a global CO_2 standard and MBMs for aircraft, progress on a policy for alternative fuels is still in the early stages, since ICAO is determining a methodology for measuring GHG reductions from alternative fuels. While alternative fuels are expected to contribute a portion of the potential reduction in global aviation GHGs, there remains significant uncertainty about the production potential and life cycle emissions of alternative fuels to 2050.

Table 11 summarizes and compares the timelines for regulatory developments of aviation GHGs within ICAO, the EU, and the US. These developments include the establishment of regulatory authority, invitations to develop regulations, milestones toward adoption, and changes in implementation.

Table 11. Timeline of regulatory developments for aviation GHGs in ICAO, EU, and US

Year	ICAO	EU	US
1997	Kyoto Protocol assigns ICAO responsibility to reduce aviation emissions		
2001	ICAO endorses an open emissions trading system for international aviation, rules out		

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	possibility of aircraft GHG standards		
2002		European Parliament and Council direct the European Commission to propose aviation emission reductions if ICAO does not proceed	
2004	ICAO rules out an aviation-specific global emissions trading system, favoring inclusion of international aviation into national emissions trading schemes		
2005		EU ETS launched as the world's first international company-level "cap-and-trade" system for reducing CO2 emissions European Council concludes that international aviation is to be included in the EU emissions trading system (ETS)	
2007			US environmental groups represented by Earthjustice petition the EPA to regulate US aviation emissions
2008		EU includes international aviation in its ETS, to take effect in 2012	EPA issues advanced notice of proposed rulemaking (ANPR) for regulating GHGs under the Clean Air Act (CAA)
2009	ICAO begins scoping out a CO2 standard for aircraft		
2010	ICAO adopts goals for global 2% annual average fuel efficiency improvement until 2020, and from 2021 to 2050; cap international aviation CO_2 at 2020 levels ICAO requests development of a CO_2 standard for new aircraft and the development of a framework for market based measures (MBMs), and decides to explore a global MBM scheme for international aviation		US environmental groups file a lawsuit against the US EPA for delaying regulation of non-road GHGs
2011		ICAO Council adopts a (Delhi) Joint Declaration opposing the EU's plan to include international flights by all carriers registered in non-EU Member States in its EU ETS	Court rules EPA must address non-road emissions under CAA; EPA promises an endangerment finding for aviation emissions
2012	ICAO agrees on a CO_2 metric system	Aviation activity included in the EU ETS starting 1 January 2012 23 countries meet and adopt Moscow Joint Declaration opposing EU ETS inclusion of international aviation, and urge EU Member States to work within ICAO on a multilateral approach to address international aviation emissions	

		EU agrees to delay inclusion of international aviation in its ETS, allowing ICAO to agree on meaningful international action by the ICAO Assembly in 2013	
2013	ICAO finalizes a CO_2 certification procedure for new aircraft ICAO agrees to develop a global MBM for international aviation		
2014		EU informally agrees to exclude international aviation from its ETS until 2017	

3.6. Public health impacts of light- and heavy-duty vehicles

The regulatory approaches for vehicle emissions and fuel quality developed in the US and Europe provide a pathway that other countries can follow to improve the environmental performance of their vehicle fleets. Regulations for LDVs in Europe progress from Euro 1 to Euro 6 using Arabic numerals, and in the US include Tier 1, Tier 2, and Tier 3 – the most recent of which sets the most stringent emission limits of any LDV regulation in the world. HDV regulations in Europe progress from Euro I to Euro VI using Roman numerals, and in the US include EPA 2004, 2007, and 2010 standards. Regulations for LDVs require new vehicles to meet emission limits based on distance traveled, while those for HDVs tend to limit new vehicle emissions based on engine work done. Both such standards tend to apply first to all new type approvals, followed by application to all new sales and registrations up to a year or so later. The timelines in this report refer to standards by the date of application to all new sales and registrations. The impact of these standards on fleetwide emissions depends on the rate of fleet turnover, which averages significantly longer for HDVs than for LDVs.

In the US, EU and Japan, vehicle emissions regulations have accelerated the commercialization of advanced emission control technologies. Because many of these technologies require cleaner fuels to function optimally, vehicle regulations have been paired with fuel quality regulations that allow the proper function of emission controls as well as reduce emissions from the legacy fleet. Such regulations have proven to be a highly cost-effective means of controlling vehicle emissions, with the most recent Tier 3 LDV regulations in the US yielding 4.5 to 13 dollars of benefits for every dollar spent on cleaner vehicles and fuel (EPA, 2014). Today, the technologies for clean vehicles and fuels necessary to meet the latest regulations in the US, Europe, and Japan are commercially available and can be transferred to other countries that adopt such regulations.

Context

To date, most countries follow the progression of European standards, which have been adopted by the World Forum for Harmonization of Vehicle Regulations for the United Nations Economic Commission for Europe (UNECE, 2012). Notable exceptions include the US, Canada,

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Mexico and Japan. There remains considerable variation in progress toward clean vehicles and fuels even among the top vehicle markets, and especially in rapidly growing smaller markets in the Asia-Pacific, Africa, Latin America, and the Middle East, with countries implementing standards anywhere from a few years to several decades after such regulations in the US and Europe.

Figure 14 compares historical and future implementation dates for nationwideemission standards among the top vehicle markets. Since the lag between adoption and application to all sales and registrations can run four or more years, some regulations provide incentives for early compliance or phase in over several years. For example, the US Tier 3 standards – which have emission limits up to 80% lower than current Tier 2 standards – will phase-in from 2017 to 2025 to allow manufacturers lead time to develop new emission control technologies.

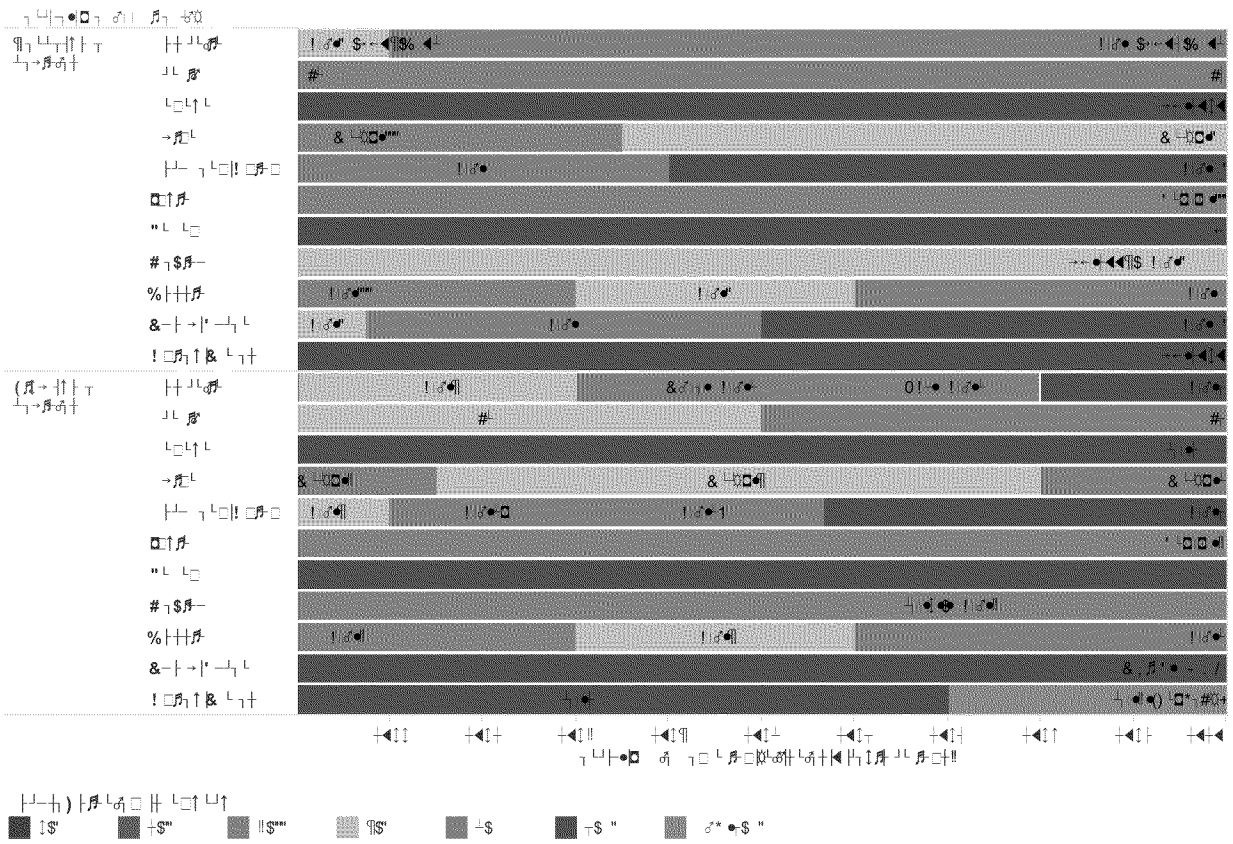


Figure 14. Light- and heavy-duty vehicle emission standards in selected regions*

** Includes eleven of the top vehicle markets (Australia, Brazil, Canada, China, EU, India, Japan, Korea, Mexico, Russia, and the US) Australia's 'Core' Euro 5 adopts the technical requirements of ECE R83/06, except that it does not require the new, PMP -based testing methods for PM mass and has no PN limit. Some other requirements are also relaxed, including the OBD threshold. Japan's PNLTES stands for 'Post New Long Term Emission Standards'.*

Outlook and projections

To date, adopted emission standards for LDVs and HDVs have yielded tremendous benefits. Figure 15 compares the estimated number of premature deaths in the selected vehicle markets

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from exposure to exhaust PM under currently adopted policies and with accelerated adoption of international best practices. Similarly, Figure 16 compares projected changes in NO_x relative to 2010. Looking forward, adopted standards are projected to significantly reduce the health impacts PM emissions; however, these gains could be counteracted by growth in vehicle activity without the implementation of standards equivalent to Euro 6/VI or better. Advancing to such standards in all 11 markets could avoid on the order of 90,000 premature deaths caused by vehicle emissions in 2030, and cut emissions of NO_x by 80% from 2010 levels. The impacts of standards on PM and NO_x emissions are broken down by region in Table 12. More in-depth analysis of the impact of vehicle emissions and fuel quality standards on on-road emissions and health impacts can be found in the ICCT's global health roadmap report (Chambliss et al, 2013).

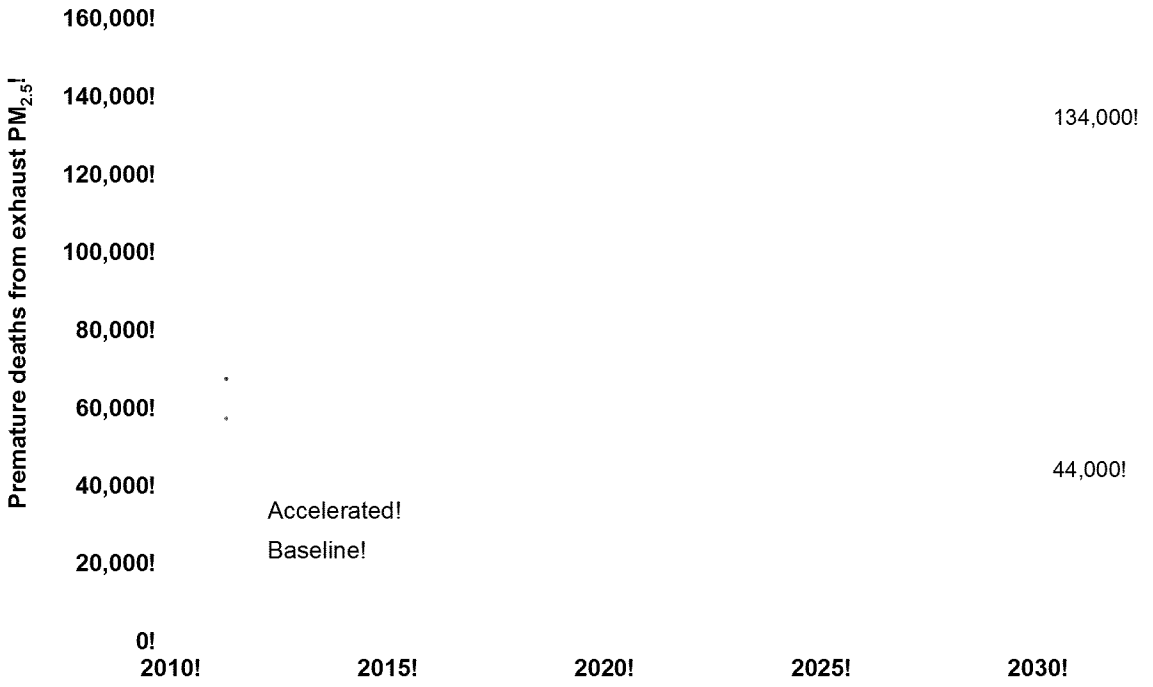


Figure 15. Premature mortalities from light- and heavy-duty vehicle exhaust $PM_{2.5}$ in selected regions*



Figure 16. Trends in light- and heavy-duty vehicle exhaust NO_x in selected regions*

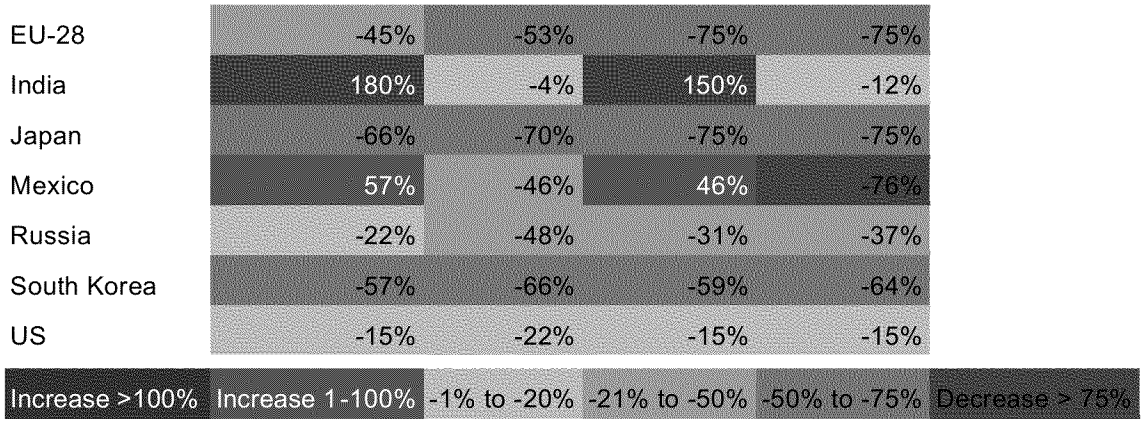
*Estimated using ICCT's Global Transportation Roadmap model (ICCT, 2014). **Adopted** = currently adopted policies. **Accelerated** = all countries implement Euro 6/VI; some countries move to next-generation standards (Chambliss et al., 2013). Includes eleven of the top vehicle markets (Australia, Brazil, Canada, China, EU, India, Japan, Korea, Mexico, Russia, and the US)*

Box 5. Health impacts from on-road vehicles

This report includes estimates of premature mortality from exposure to exhaust emissions of $PM_{2.5}$ in urban areas, and is not intended to capture the full burden of health impacts from the transport sector. Intake fractions are used to convert exhaust $PM_{2.5}$ emissions to urban concentrations. Intake fractions, which vary by geography, meteorology, and population size, represent the share of total emissions that are inhaled. This health assessment method offers unique advantages: (1) it utilizes previously developed global health, demographic, and intake fraction datasets that permit consistent application and comparison across regions; (2) it provides rapid estimates of health impacts that do not require resource-intensive global chemical dispersion modeling; and (3) it does not rely on detailed modeling of emissions from other sectors, enabling the analysis to focus on the transport sector. A more comprehensive description of this methodology is described in Chamblisset al. (2013).

Table 12. Percent change in light- and heavy-duty vehicle exhaust NO_x and $PM_{2.5}$ emissions from 2010 to 2030

	Percent change in NO_x		Percent change in $PM_{2.5}$	
Region	Adopted	Accelerated	Adopted	Accelerated
Australia	-35%	-68%	-26%	-37%
Brazil	-28%	-69%	-50%	-84%
Canada	-21%	-29%	-14%	-14%
China	41%	-48%	-55%	-68%



*Estimated using ICCT's Global Transportation Roadmap model (**ICCT, 2014**). **Adopted** = currently adopted policies. **Accelerated** = all countries implement Euro 6/VI; some countries move to next-generation standards (Chambliss et al., 2013).*

3.7. Sulfur content of gasoline and diesel on-road fuels

Reducing the sulfur content of diesel and gasoline is key to enabling the introduction of advanced vehicle emission controls to meet post-Euro 2/II regulations. Sulfur content of fuel is also directly tied to the production of sulfates, which contribute to PM emissions. Regulations for diesel vehicles require reductions in fuel sulfur content for optimal function and durability: these include 500 ppm for exhaust gas recirculation (EGR), 50 ppm for selective catalytic reduction (SCR) and diesel oxidation catalysts (DOC), and 15 ppm for NO_x adsorbers and diesel particulate filters (DPF) (Blumberg et al., 2003); while technical capabilities are slightly different than regulatory requirements, lower sulfur levels generally result in lower tailpipe emissions. Similarly, gasoline vehicles are recommended to operate using fuel with fewer than 50 ppm sulfur for three-way catalysts (TWC), 30 ppm for advanced TWCs, and 15 ppm for NO_x traps for full function of emissions controls (Blumberg et al., 2003).

Context

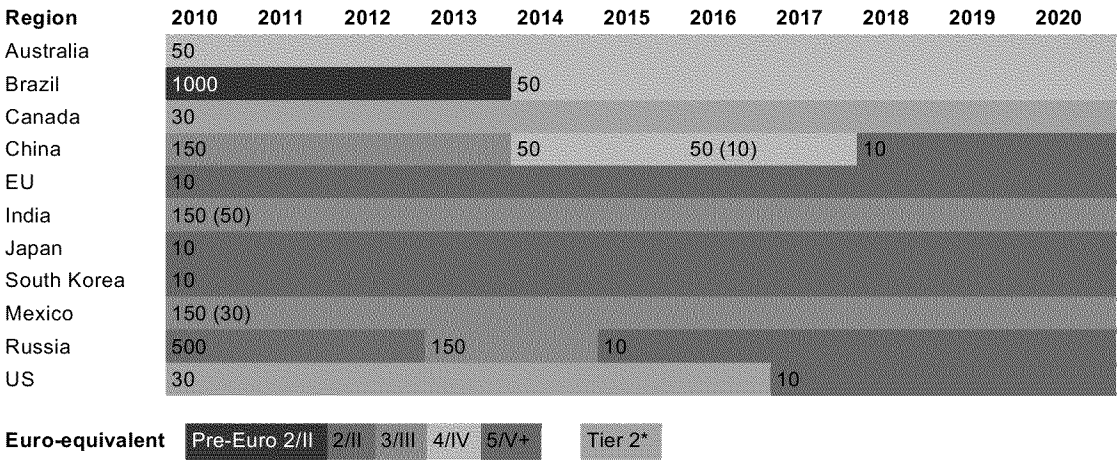
Limiting the sulfur content of on-road gasoline and diesel to a maximum of 10 to 15 ppm (ultralow-sulfur) is an essential component of best-practice vehicle emissions control programs in both fuel-importing and fuel-producing countries. Such improvements yield immediate emission benefits from the existing vehicle fleet and enable the progression of emission standards. In countries without domestic vehicle production, improving fuel quality can enable the proper function of emission controls on imported vehicles that would otherwise malfunction with lower-quality fuel. In addition to regulatory requirements, fuel-importing countries and local governments can incentivize cleaner fuels with differential taxation; fuel-producing countries can either invest directly in refinery upgrades or offer refiners subsidies or tax breaks to produce cleaner fuels. To date, six of the selected markets have established pathways toultralow-sulfur gasoline, while eight have done so for ultralow-sulfur diesel.

The following timelines for adoption of gasoline and diesel sulfur limits highlight the wide variation among countries regarding current nationwide sulfur limits for on-road gasoline and diesel. In many countries such as Brazil, China, and India, lower sulfur fuels are available in

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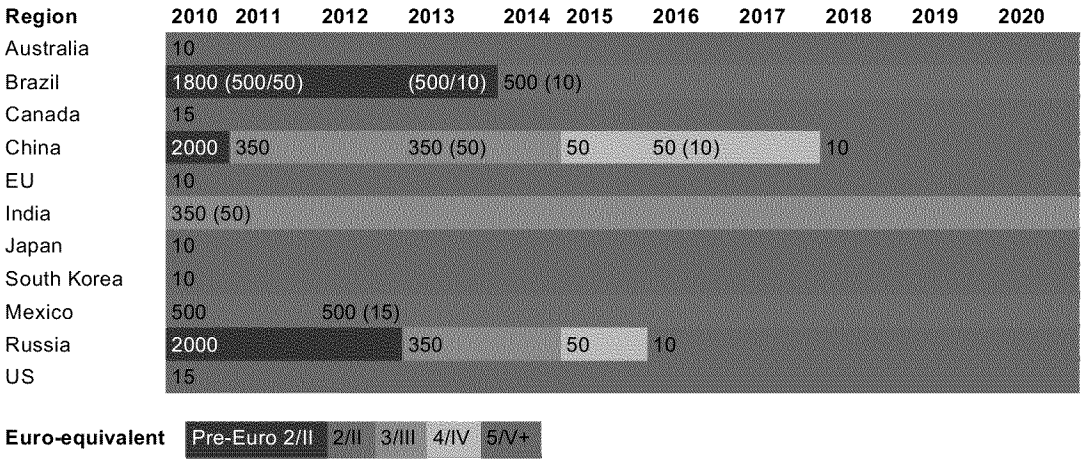
major metropolitan areas or select provinces, while higher sulfur fuels are sold in other areas of the country.

Table 13. Timeline for adopted nationwide gasoline sulfur limits (parts per million)



**US Tier 2 requires 30-ppm average; EU requires caps*

Table 14. Timeline for adopted nationwide diesel sulfur limits (parts per million)



3.8. Air pollutant emissions of international marine vessels

Conventional pollutants from international marine vessels are regulated by the IMO's MEPC under Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL). While GHG discussions within the IMO have focused primarily on CO_2, BC is a potent short-lived climate pollutant in addition to its adverse health effects. SO_x and NO_x are targets for emission reduction primarily based on their adverse air quality impacts. While a portion of shipping emissions occur far out at sea, 70-80% of SO_x, NO_x, and BC are emitted from ships traveling within 400 km of a coastline, close enough to have significant impacts on

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human health (Wang, 2013a). For all three pollutants, proven technologies and fuels exist that are capable of reducing emissions by over 90% from uncontrolled levels (ICCT, 2013).

Context

Reducing the sulfur content of fuel has a direct impact on SO_x emissions, and the MEPC has made low-sulfur marine fuel a core component of its strategy to limit air pollution from shipping. Figure 17 shows the timeline for fuel sulfur requirements adopted by the IMO. Since 2000, the IMO has capped marine fuel sulfur at 4.5% (45,000 ppm) globally, and in 2012, it tightened this limit to 3.5%. Ships are required to switch to lower sulfur fuel (1%) when operating within designated Emission Control Areas (ECAs); as of 2014, these include the North Sea, Baltic Sea, North American, and Caribbean. Starting in 2015, the fuel sulfur limit within existing ECAs will tighten to 0.1% (still a factor of 100 higher than ultralow-sulfur on-road fuel), and in 2020 the global limit for marine fuel sulfur is scheduled to decrease to 0.5%. A fuel availability review started in March 2014 and will determine if the 2020 implementation date will stand. Currently, a correspondence group of nations has been convened, headed by the US to discuss the issue and provide recommendations by 2016.

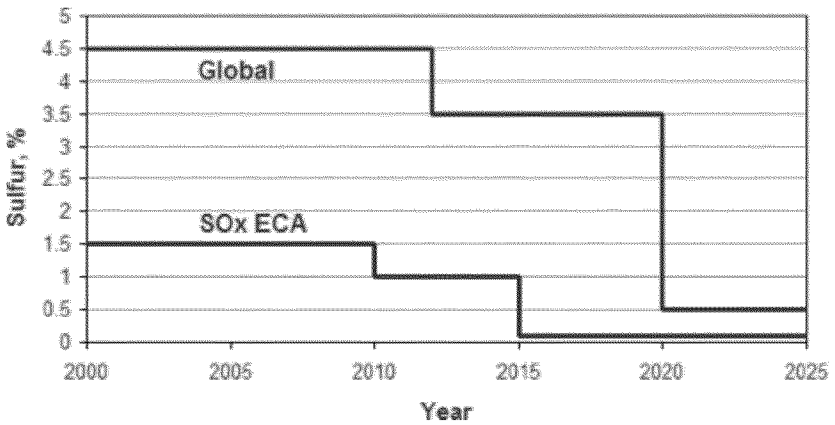


Figure 17. IMO low-sulfur fuel requirements, 2000-2025 (ICCT & DieselNet, 2014)

In coastal areas not protected by an ECA, local governments have taken fiscal and regulatory actions to encourage ships to switch to lower sulfur fuel when entering a port area (Wang, 2013b). Such local actions have significant potential to improve regional air quality and augment the benefits of international action (Wang, 2013a).

Similar to emission standards for HDVs, MEPC has limited NO_x emissions from new ships globally at Tier I levels since 2000, and Tier II since 2011. As shown in Figure 18, the NO_x limits of adopted Tier I and Tier II programs will be significantly tightened with the newest Tier III standards, which will apply to ships traveling within ECAs. Prior to the MEPC meeting in 2013 (MEPC-65), amendments to Annex VI were slated to require new build ships to meet Tier III standards when operating within ECAs starting in 2016. This 2016 application date would apply to any future NO_x control areas, creating consistency in technology application requirements. At MEPC-65 following the report of the correspondence group tasked with determining the

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feasibility of the NO_x Tier III implementation date, the Russian Federation raised objections to 2016 citing an inability of current technologies to reach the required NO_x reductions in safe, economical ways. Several countries and industry groups submitted papers supporting current technologies, specifically Selective Catalytic Reduction (SCR), to meet the NO_x Tier III requirements and urging members to uphold the 2016 implementation date for existing ECAs (Azzara et al., 2014). After deliberation, NO_x Tier III for the North American ECA in 2016 was upheld with a compromise on new ECAs reached (Rutherford, 2014). For new ECAs, the emission control requirement for new vessels will come into effect only after the ECA application has been approved by the MEPC.

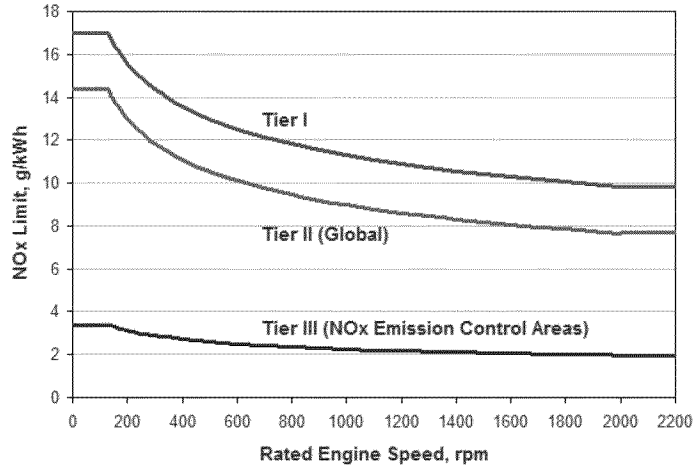


Figure 18. IMO Tier I, Tier II, and Tier III NO_x requirements (ICCT & DieselNet, 2014)

In addition to their impact on human health, black carbon emissions from international shipping are accelerating the pace of climate change, especially in the Arctic region due to the melting impacts of black carbon on ice and snow (Azzara, 2014). In 2010, the IMO committed to take action to reduce marine BC specifically in the Arctic: "The Committee agreed that ship's emissions of black carbon and other particulate matter affecting the Arctic region needed to be addressed specifically as an integral part of the Organization's work on prevention of air pollution from ships and its contribution to combat climate change and global warming " (MEPC 60/22). In 2011, the MEPC created a correspondence group with the mission to 1) define black carbon, 2) recommend methods to measure black carbon emissions from vessels, and 3) identify technologies to reduce emissions. The first two components have suffered considerable delay due to a lack of consensus on the specific definition of BC and an appropriate mechanism to measure emissions. Until the issues of definition and measurement are resolved, the conversation cannot progress to mitigation technology – nor can the issue of black carbon emissions be taken up by other subcommittees, for example, Ship Design and Construction, which is tasked with developing the Polar Code for safety and environmental protection in the Arctic (Azzara, 2014). Two possible definitions of black carbon, each associated with one or more means of measurement, will be considered by IMO at the MEPC 67 meeting in October 2014.

Outlook and projections

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The effects of adopted IMO regulations are expected to vary by pollutant over the next fifteen years. Based on ICCT modeling, and as shown in Figure 19, emissions of NO_x, SO_x, and PM_{10} from shipping would have increased by factors ranging from 1.7 to 3.4 from 2007 to 2030 without policy action. Under adopted IMO regulations, NO_x emissions are still forecast to increase, albeit less quickly as a resu lt of Tier III regulations. Low -sulfur fuel regulations are forecast to reduce emissions of SO_x and PM to 60% and 40% below 2007 levels by 2030, respectively, despite rapid growth in shipping activity.

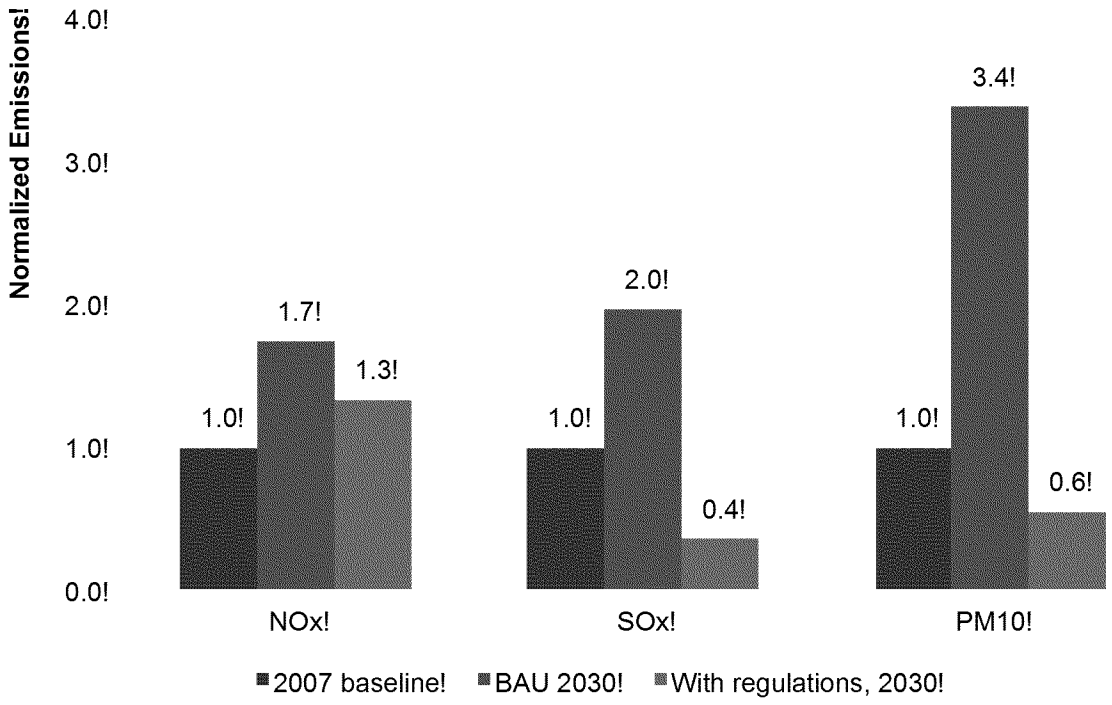


Figure 19. Trends in global marine emissions, 2007-2030

Table 15 provides additional background regarding regulatory developments within th e IMO for low-sulfur fuel, NO_x emission standards, and BC emission reductions. These developments cover establishment of regulatory authority, formal calls to regulate harmful pollutants, major technical studies, adoption, and implementation of policies. Established implementation dates are also included beyond 2014.

Table 15. Timeline of regulatory developments for marine pollutants within the IMO

Year	Low-sulfur fuel	NOx emission standards	Black Carbon (BC)
1997		1997 protocol to MARPOL, including Annex IV, agreed upon at IMO	
2000	1.5% sulfur limit in SOx ECA; 4.5% global sulfur limit	Tier I (retroactive to new engines installed on vessels after Jan 1, 2000)	
2004		Annex VI was ratified	
2005	Baltic Sea SOx ECA entered	Annex VI entered into force	

	into force		
2006	North Sea SOx ECA entered into force		
2008	IMO adopted amendments for fuel standards beginning in 2010	IMO adopted amendments for Tier II & III NOx standards along with Tier I NOx requirements for pre-2000 engines (known as the 2008 amendments)	
2009			Arctic Council identifies BC as of particular concern due to effects on snow and sea ice
2010	North American SOx ECA adopted	2008 Amendments enter into force	
2011	Caribbean SOx ECA adopted	Tier II implementation	MEPC BLG subcommittee begins work to define, measure, identify control options of BC
2012	ECA 1% sulfur; 3.5% global sulfur limit	IMO NOx technology correspondence group undertook technology feasibility study	Report submitted to IMO on BC mitigation technologies
2013		Russian Proposal to push implementation date to 2021	US acknowledges potential for unintended consequences of arctic BC on climate trends
2014	US Caribbean ECA comes into force	Compromise on implementation: US ECA 2016; future ECAs to be determined by date of application approval	PPR-1 IMO subcommittee meeting held. During the meeting a BC working group was established.
2015	ECA 0.1% sulfur		
2016	IMO expected to complete fuel availability study	North American ECA Tier III	
2020	Global 0.5% sulfur		
2025	Alternate 0.5% pending study results		

3.9. International aviation emissions

ICAO has developed, or is currently developing, several policy instruments to control aviation emissions, including aircraft NO_x emission standards, and most recently a new certification requirement for PM emissions from aircraft engines that will serve as the basis for a future standard. ICAO has also developed standards for noise control at airports, but those are beyond the scope of this report.

NO_x Emission Standards

In response to concerns about local air quality in the vicinity of airports, in 1981 ICAO adopted engine certification standards for NO_x, CO, unburned HC, smoke, and liquid fuel venting based on the Landing Take-Off (LTO) cycle below 3,000 feet altitude (REFERENCE). Known as the

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CAEP/1 (first meeting of the Committee on Aviation Environmental Protection) NO_x standard, this applied to newly manufactured engines beginning in 1986. In the following decade, ICAO adopted increasingly stringent NO_x standards in an effort to constrain emissions growth (parenthesis denote year of adoption):

- CAEP/2 NO_x (1993): Reduced emission limits by 20% for newly certified engines starting in 1996 and for already -certified newly manufactured engines starting in 2000;
- CAEP/4 NO_x (1999): Required additional 16% reductions relative to CAEP/2 standard beginning in 2004;
- CAEP/6 NO_x (2005): Required additional 12% reduction from CAEP/4 levels;
- CAEP/8 NO_x (2011): Mandated additional reductions of 5% to 15% for small engines and 15% for large engines certified starting in 2014 compared to the CAEP/6 standard. Also confirmed that all individual engines produced on or after 1 January 2013 must comply with CAEP/6 NO_x standard or face a production cutoff.

In addition to these standards, which are typically established as technology-following standards to prohibit backsliding from new engines, in 2010 ICAO established more aggressive but non-binding medium- and long-term NO_x technology goals equivalent to a 45% reduction of CAEP/6 for 2016 and 60% reduction of CAEP/6 for 2026 (REFERENCE).

Since ICAO has no formal enforcement authority, these standards are translated into national requirements under domestic legislature and implemented by national transportation or environmental authorities. For example, the US EPA adopted CAEP/2 NO_x standard to align its aircraft emissions standards with ICAO in 1997, and updated those standards in 2012 to take into account the CAEP/6 and CAEP/8 standards for engines depending upon their original type certification dates.

ICAO's NO_x standards are based upon an LTO test cycle and targeted towards improving air quality around airports. ICAO has chosen not to regulate cruise NO_x emissions, which contribute to global climate change, on the basis that LTO NO_x has a positive relationship to cruise NO_x emissions and so the existing LTO NO_x standards should correspondingly reduce in cruise NO_x (REFERENCE).

Particulate Matter Standard Development

In 2010, ICAO began the development of a non-volatile particulate matter (nvPM) standard, aimed at reducing the impacts of ultrafine particulate matter on air quality, human health, and global climate (REFERENCE). At CAEP/9 in 2013, CAEP agreed to develop, in conjunction with the SAE E-31 committee, a new emission certification requirement for turbofan/turbojet engines greater than 26.7 kN to measure and quantify nvPM emissions based upon both mass and number (ICAO, 2013). ICAO expects to adopt the first nvPM standard at the CAEP/10 meeting in February 2016. In addition, ICAO is considering a potential nvPM emission s standard for turbofans/turbojets less than 26.7 kN, including turboprops, helicopter turboshaft, and APU engines.

Aircraft Noise Standards

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Although noise is beyond the scope of this report, noise pollution is a serious environmental impact from aviation, and it was the first environmental issue addressed by ICAO with the implementation of the Stage 2 noise standard in 1972. Since then, ICAO's noise standard has been periodically updated, most recently at the CAEP/9 meeting in 2013 with the adoption of a new "Chapter 14" noise standard. To date, CAEP has followed the approach of establishing technology-following standards meant to ensure that new technologies, once developed, are deployed in a timely manner across the in-production fleet. This means that new aircraft types easily meet the standards, suggesting further room for improvement and near-term updates given sufficient environmental pressures.

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CHAPTER 4. CONCLUSIONS

This chapter summarizes major regulatory developmentsfrom 2013 through July 2014, and the current state of clean transport policies, synthesizing a number of high-level conclusions from the above sections. The scope of the paper has been to highlight clean vehicle and fuel policy developments in the selected vehicle markets, as well as international marine and aviation. In summarizing the report's work, this chapter also provides recommendations for future policy development.

Conclusion 1: There have been a considerable number of major regulatory developments in clean transport in 2013/2014

From January 2013 through July 2014, 15 major new policies were implemented, 9 new such policies were adopted, and there were 4 new regulatory proposals in 11 of the selected vehicle markets and for international marine and aviation(Table 15). Brazil, India, and Mexico adopted their first regulations to improve the efficiency of new light-duty vehicles (LDVs), while the EU approved and China proposed more stringent standards. The EU's standards make its CO_2 requirements the most stringent in the world by 2021. The regulation of HDV efficiency has lagged behind LDV regulations, with the US, Canada, and China just implementing their first HDV efficiency standards. Many regions implemented more stringent vehicle standards for local air pollutants, including China, the EU, Brazil, Russia, and South Korea. The US adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide. There has also been progress toward lower sulfur fuels in China, the US, and Brazil that lay the foundation for dramatically strengthened vehicle emissions regulations. In addition, the EU, US, and California have proposed several revisions to strengthen their low-carbon fuel policies. At the international level, two policies entered into force in 2013 that wi ll improve the efficiency of marine vessels: the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP).

Table 16. Number of developments from 2013 through July 2014 by policy type*

Policy Type	Implemented	Adopted	Proposed	Delayed
Light-duty efficiency	2	4	1	–
Heavy-duty efficiency	3	1	–	–
Light-duty emissions	2	1	–	–
Heavy-duty emissions	4	–	–	–
Gasoline fuel sulfur	1	2	–	–
Diesel fuel sulfur	1	1	–	–
Low carbon fuel	-	-	3	-

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International marine	2	–	–	1
International aviation	–	–	–	–
Total	**15**	**9**	**4**	**1**

** Includes 11 of the top vehicle markets (China, the US, the EU, Japan, Brazil, India, Russia, Canada, South KoreaAustralia, Mexico), and international marine and aviation*

Many countries implemented more stringent vehicle standards for local air pollutants, including the EU (Euro VI for HDVs), South Korea (Euro VI for HDVs), China (Euro IV-equivalent for HDVs), Brazil (Euro 5-equivalent for LDVs), and Russia (Euro 5 for LDVs and Euro V for HDVs). The US also adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide. There has also been progress toward higher quality fuels in China (nationwide 50-ppm diesel by the end of 2014, and 10-ppm gasoline and diesel by 2018), Brazil (nationwide 50-ppm gasoline and 500-ppm diesel by 2014; and 10-ppm diesel in major metropolitan regions and select stations nationwide to fuel Euro V-equivalent trucks), and the US (10-ppm gasoline by 2017) that lay the foundation for dramatically tighter vehicle emission regulations.

With the addition of policies that have been adopted from 2013 through July 2014 as described in this report, Table 17 summarizes the current state of adoption of clean fuel and vehicle policies. The 11 vehicle markets that are assessed here encompass 85% of the 2013 world vehicle market by sales. Nationwide ultralow-sulfur fuel standards (9 of 11 regions) and LDV efficiency standards (8 of 11) have been adopted in the majority of the selected vehicle markets, even if not yet implemented in all of them. The most stringent vehicle emission standards, those equivalent to Euro 6/VI standards (in 5 of 11 regions), and regulations that would increase HDV efficiency (4 of 11) have had more limited adoption to date. Only two regions have fuel standards that would require reduced fuel GHG intensity over time.

Table 17. Status of clean vehicle and fuel policies in the eleven top vehicle markets

	Percent of world vehicle sales 2013	Light-duty efficiency standards	Heavy-duty efficiency standards	Low-carbon fuel policies	Light-duty emission standards equivalent to Euro 6 or better	Heavy-duty emission standards equivalent to Euro VI	Ultralow-sulfur diesel standards (nationwide)
China	25%	X	X*				X*
US	19%	X	X	X	X	X	X
EU	17%	X		X	X	X	X
Japan	6%	X	X*		X	X	X
Brazil	4%	X**					X***
India	4%	X*					
Russia	3%						X*
Canada	2%	X	X		X	X	X

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South Korea	2%	X			X	X	X
Australia	1%				X		X
Mexico	1%	X*					X***
Other countries	15%						

"X" denotes adopted; "Efficiency standards" refer to fuel economy, fuel consumption, or carbon dioxide (CO_2) standards.
** Some adopted standards have not yet been fully implemented. These include LDV efficiency standards for India (2021) and Mexico (2016); HDV efficiency standards forChina (2015) and Japan (2015); ULSD for China (2018) and Russia (2016)*
*** Brazil's Inovar-Auto program offers fiscal incentives that are considered equivalent to a standard in this comparison.*
**** Mexico has adopted a nationwide ULSD standard but has not yet achieved full nationwide compliance. Brazil requires ULSD availability in select stations and metropolitan areas to supply Euro V-equivalent heavy-duty trucks operating nationwide.*

There has also been progress in international policy venues. Related to the international maritime industry, the EEDI and SEEMP, two policies that will improve the efficiency of marine vessels, entered into force in 2013. Despite the lack of regulatory action towards a final aviation policy, ICAO finalized a CO_2 certification procedure for new aircraft in 2013, a key step towards a global CO_2 standard.

4.1. Climate impacts and energy use

Conclusion 2: Efficiency standards now cover three out of four light-duty vehicles sold.

In a span of just ten years through 2014, the share of global LDV sales regulated for fuel consumption or carbon dioxide (CO_2) emissions increased from roughly 30% to over 75%. These regulatory standards are projected to reduce business-as-usual (BAU) energy consumption by 7.4 mbd in 2030, equivalent to 15 $GtCO_2$, including fuel combustion and upstream emissions. As a reference point, global transport CO_2 emissions were 8.8 $GtCO_2$ in 2010. However, efficiency standards for passenger vehicles have not been adopted in many emerging economies where vehicle sales will grow the fastest (e.g., in Asia-Pacific, Latin America, Middle East, and Africa). As a result, standards adopted thus far will be insufficient to offset the projected increase in vehicle activity and associated emissions.

> **Recommendation: extend and expand light-duty vehicle efficiency standards.** A key priority is to expand standards to the remaining 25 percent of vehicles in unregulated markets. In addition, existing efficiency standards would need to be extended and strengthened in currently regulated markets to keep pace with technological developments. Only the US (and Canada is expected to follow) has long-term standards with enough regulatory lead-time – through 2025 – to drive investments in the most advanced efficiency technologies. Otherwise, all existing and proposed standards, including the EU and China, have regulatory goals only through 2020 or 2021 (or earlier), with updates generally only set on 5-year intervals. Adoption of standards with a longer lead-time, at least through model year 2025, would give manufacturers more time to invest in research and development for advanced technologies and provide greater certainty of future regulatory requirements. This recommendation is most

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applicable to those nations that have established standards, including Europe, Mexico, Brazil, India, China, Japan and South Korea. The extension of LDV efficiency standards in current markets, and the expansion standards to new markets could essentially stabilize GHG emissions from the transport sector after 2020, and cut emissions by 0.95 $GtCO_2$ in 2030 compared to a scenario without those policies in place.

Recommendation: expand the electric-drive vehicle market.
As leading nations implement stringent low-emission and high-efficiency regulations in their LDV sectors, electric-drive vehicles are receiving increasing attention from industry, government, and media as a source of ultralow-emission passenger mobility. To the extent that electric-drive vehicles are powered by renewable electricity, they have a clear advantage over conventional internal combustion engines due to their higher efficiency and low carbon energy sources. Regulatory vehicle efficiency and GHG standards will encourage greater investment and deployment in more advanced efficiency and electric - drive vehicle technologies, especially as their costs decrease with research and development, and higher production volumes. Additional policies will complement regulatory standards, and numerous regions have already adopted tax exemptions, direct subsidies, and other non-fiscal incentives to encourage the sale of electric-drive vehicles. However, such vehicles still account for a small share of overall passenger car sales, representing about 6% in Norway, and less than 1% in most developed countries (Mock & Yang, 2014). Stronger measures are needed to accelerate the market adoption of electric-drive vehicles and capture the associated benefits of reduced CO_2 emissions and fuel consumption.

Conclusion 3: Progress in the adoption of HDV efficiency standards has been slow.

Despite substantial policy progress in the regulation of LDV efficiency and GHG emissions , there has been only limited progress in the development of HDV efficiency standards globally, despite the fact that HDVs represent more than 40% of on-road fuel consumption in most vehicle markets, and more than 50% in Brazil, China, and India (ICCT, 2014). To date, standards for HDVs have only been adopted in China, the US, Japan, and Canada. In many cases, data limitations, challenges to tackle a diverse sector with very diverse vehicles (e.g., long-distance heavy-duty trucks, interurban buses, garbage trucks), and insufficient industry engagement prevent more immediate progress in HDV efficiency standards. Because of increased demand for freight truck and bus transit activity, HDV emissions will continue to grow substantially and current estimates indicate that CO_2 emissions from the sector will grow nearly 60% by 2030 from 2010 levels (ICCT, 2014).

Recommendation: expand adoption of HDV efficiency standards.
The expanded adoption of HDV efficiency standards could have a substantial impact on the reduction of energy consumption and GHG emissions, stabilizing HDV emissions after 2025, and saving 0.59 $GtCO_2$ in 2030 when compared to a scenario without those policies in place. Voluntary “green freight” programs could also offer an important opportunity for early action while regulations for fuel efficiency of HDVs are being considered. In some cases, like in the EU, extensive data collection, laboratory

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investigation, and regulatory assessment can provide a sufficient foundation for mandated HDV efficiency standards. Mandated regulatory CO_2 reductions from HDVs in the EU could also be a critical step toward similar policies in markets around the world with similar HDV fleets that are following EU emission standards.

Conclusion 4: Despite efficiency regulations for new marine vessels, the marine and especially the aviation sector have been slow to adopt efficiency and GHG regulations.

Marine and aviation GHG emissions are either only partially included (i.e., domestic component only) or omitted entirely in national inventories. Primarily because so much of ship and aircraft emissions and fuel use are for journeys between countries, their impacts remain widely unacknowledged, and mitigation actions are perpetually de-prioritized. For the marine sector, new vessel efficiency standards have entered into force, and will reduce GHG emissions by 0.34 $GtCO_2$ in 2030 compared to a BAU scenario. However, a comprehensive policy requiring mandatory reductions in in-use fuel consumption remains under development, a critical undertaking since older and less efficient vessels can take four decades to retire. There are currently no proposed or adopted policies for a global CO_2 standard for new aircraft or a global market-based measure to constrain and offset emissions from the in-service fleet.

Recommendation: strengthen efficiency regulations for the marine sector and adopt regulations for aviation.

The potential to mitigate the in-use marine fleet's CO_2 emissions is among the most substantial of all policies discussed in this report, if appropriate international policy were to be adopted. Such policies, alongside strengthened standards for new vessels, could save 0.25 $GtCO_2$ in 2030 compared to a scenario with EEDI in place. Similarly, efforts by ICAO to develop both a CO_2 standard for new aircraft and a global MBM framework for the in-service fleet by 2016 could be among the most significant actions to reduce CO_2 emissions and fuel consumption from transport in the long run.

Conclusion 5: Leading low-carbon fuel policies are still in development

Many countries have now established targets for increased biofuel deployment for future years. The EU, US, and California policies have gone further, moving toward greater rigor, analysis of more fuel pathways, and comprehensive lifecycle accounting of land use effects to better differentiate the sustainable fuels that are reliably low carbon. These three leading governments are still actively developing their policies, with key challenges related to how they promote various biofuel, fossil fuel, and electric-drive fuel sources. The EU and California regulatory standards would reduce average fuel carbon intensity by approximately 6% in the 2020 timeframe.

Recommendation: Promote low-carbon, deter high-carbon fuels

To establish more robust longer-term fuel carbon policy, countries should shift from generic biofuel targets to policies that promote fuels with reliably low lifecycle carbon, low indirect land use, and minimal food system interaction. Recent EU-based findings indicate that up to 16% of road transport fuel could be derived from waste-based

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sources by 2030. In addition, fuel policy that disincentivizes the use of high-carbon fossil fuels (e.g., oil sands, high-upstream leakage natural gas) is lacking, with the possible exception of California. Over the long-term, developing these fuel policies to especially promote de-carbonized electricity (and hydrogen) for a growing number of electric-drive vehicles, will be a key climate stabilization goal for transport.

Conclusion 6: The transport sector has shown much progress in adopting climate mitigation policies to date, and further cost-effective low-carbon technologies remain.

Vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Actions toward international marine vessel efficiency have also proven the potential effectiveness of international fora when they have a sectoral focus and a strong business case. Yet many cost-effective opportunities remain to reduce transport sector CO_2 emissions and accrue fuel savings that offset technology costs. Such opportunities exist to extend existing policies (e.g., through 2025), adopt similar policies in emerging vehicle markets, expand progress to other transport modes (e.g., HDVs, marine, aviation), and shift to alternative low-carbon fuels.

Penetration of cost-effective vehicle, marine, and aviation efficiency technologies and low-carbon fuels into all major vehicle markets could have dramatic effects on global CO_2 emissions and petroleum use from transport. Figure 19 summarizes the full effects of adopted and potential vehicle and fuel regulations on global CO_2 emissions from the transport sector. Regulations adopted to date will reduce lifecycle CO_2 emissions by 2.2 $GtCO_2$ from BAU levels in 2030, equivalent to approximately 11 mbd not used. Additional reductions from the expansion of best-practice policies can essentially stabilize global CO_2 emissions after 2020, even with continued growth in the demand for passenger and freight transport.

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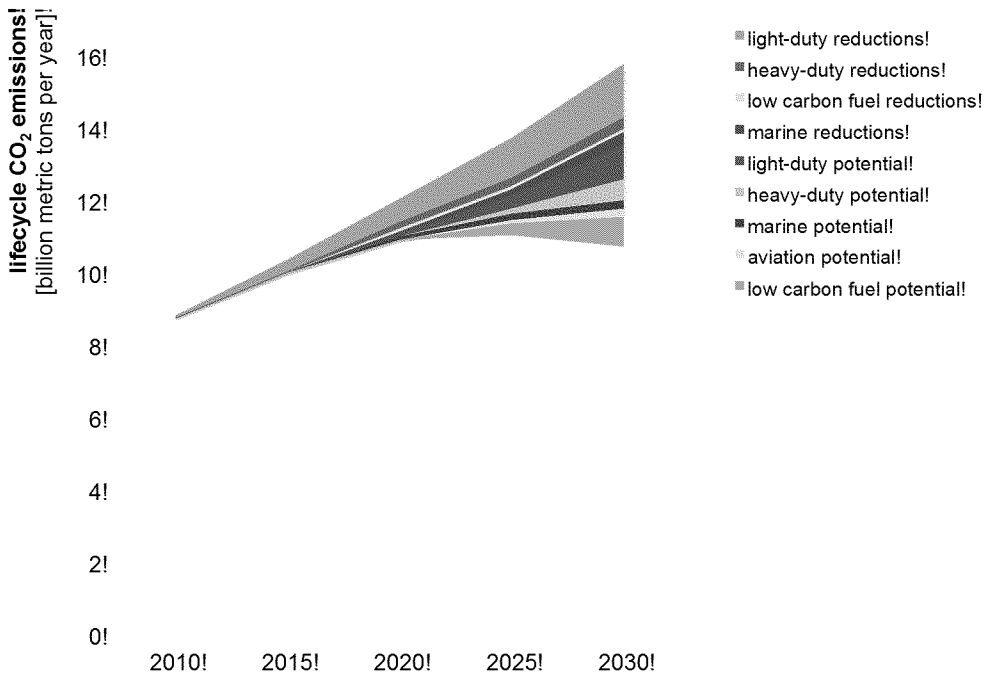


Figure 20. Global CO_2 emissions from transport, 2010–2030

The adopted policy actions and the potential for additional transport-sector policies to mitigate GHG emissions are substantial. However, global policies that have been adopted to date are not nearly sufficient to constrain temperature increases to two degrees Celsius and avoid catastrophic climate change (IPCC, 2014). Future research should include a comparison of the impacts of adopted and potential climate mitigation actions across the economic sectors (e.g., transport, electric power, industrial, forestry) toward achieving global climate targets.

Based on the recent transport sector success, vehicle efficiency efforts by governments and automobile manufacturers have set a clear example that sector-specific national-level policy action is key to achieving global climate goals. Yet many cost-effective opportunities remain to reduce carbon emissions and accrue fuel savings that offset technology costs. The transport sector has policy opportunities to extend the existing policies (e.g., through 2025), adopt similar policies in emerging vehicle markets, expand progress to other transport modes (e.g., HDVs, marine, aviation, off-road), and shift to alternative low-carbon fuels. However, we note that far greater research is needed to better understand where the most feasible and cost-effective energy and GHG mitigation actions are, across transport and the other sectors.

4.2. Air pollutant emissions and public health

Conclusion 7: Two out of three new vehicles lack world-class emission controls.

World-class vehicle standards for local air pollutants require state-of-the-art emission control technologies for pollutants with strong adverse health impacts such as PM and NO_x. A prominent benchmark is to achieve Euro 6/VI emission levels, at which exhaust emissions of PM and NO_x are reduced by over 97% from unregulated levels. Such standards apply to all sales and registrations in the US, Japan, and Canada, and to type approvals in the EU and South Korea. No other vehicle markets have yet proposed or adopted equivalent standards, and many medium-sized vehicle markets in Asia-Pacific, Middle East, Latin America, and Africaare several steps behind these world-class standards. In particular, a lack of regulations to ensure low-sulfur fuel supply remains a fundamental inhibitor to advancing vehicle emission regulations. The result will be increasingly severe public health impacts from transport until requirements for low-sulfur fuel and vehicle emissions controls are harmonized with the world-class standards adopted in most developed regions.

The lack of strong controls on vehicle emissions in emerging and developing regions is increasingly more critical as vehicle sales grow very rapidly. The share of light- and heavy-duty vehicle sales subject to Euro 6/VI-equivalent standards is increasing, from roughly one in four globally in 2010 to an estimated one in three in 2015. Nevertheless, much of the growth in vehicle sales is occurring in countries that have yet to ado pt such standards. Figure 20 shows trends in total vehicle sales by region from 2005 to 2013, as well as the annualized change in sales over this period.

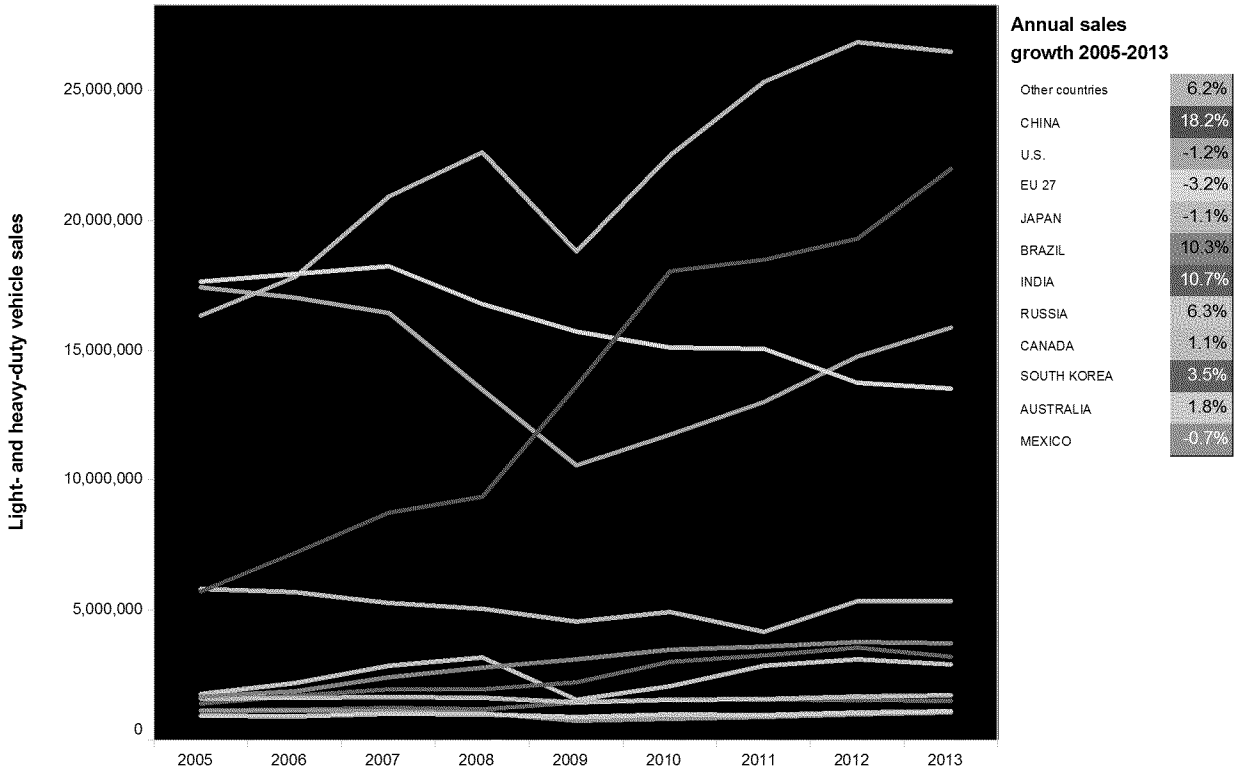


Figure 21. Sales of light- and heavy-duty vehicles, 2005-2013

Note that three of the four top vehicle markets, the US, EU, and Japan, had lower sales in 2013 than in 2005, meaning that there are fewer – and cleaner – vehicles entering the roads in these regions each year. Conversely, none of the fastest growing major vehicle markets – China, India, Brazil, and Russia – have set implementation dates for world-class emission standards (Euro 6/VI-equivalent or better). Moreover, other countries in Asia-Pacific, Latin America, Middle East, Africa, and post-Soviet states had greater combined sales in 2013 than China and India combined; most of these countries are several levels of emission control behind world-class standards. While several of the largest vehicle markets require state-of-the-art emission controls and others are considering harmonizing with existing standards, growth in urban transport activity will present an increasing public health risk unless emissions and fuel sulfur standards are brought up to date worldwide.

> **Recommendation: expand world-class vehicle and fuel standards to emerging and developing economies.**
> Because emerging and developing regions are experiencing rapid motorization and have not yet adopted world-class vehicle and fuel standards, they would strongly benefit from the adoption of world-class vehicle and fuel standards in terms of air quality improvements and public health benefits (see Conclusion 9).

Conclusion 8: Despite progress with current emission standards for international marine and aviation, future policy developments and timelines remain uncertain.

IMO is responsible for setting emission standards for international vessels, and has to date regulated emissions of NO_x and sulfur content of bunker fuels. Tier I levels for NO_x were introduced in 2000, and were since replaced by Tier II levels in 2011, with a reduction in emission rates of about 15%. Tier III levels, which will eventually apply to ECAs, will reduce emission rates of NO_x by roughly 80% from Tier I levels. Sulfur content is currently regulated at 3.5% (35,000 ppm), and is scheduled to be reduced to 0.5% in 2020. The regulation of BC to tackle both climate change and human health is pending technical discussions regarding the definition and measurement methods for BC. For ECAs, sulfur levels are currently set at 1%, and are scheduled to be reduced to 0.1% in 2015. ECAs are important because 70-80% of SO_x, NO_x, and BC are emitted from ships traveling within 400 km of a coastline, close enough to have significant impacts on human health (Wang, 2013a).

For international aviation, ICAO has developed multiple tiers of global aircraft NO_x emission standards, which are based on the landing take-off (LTO) cycle and target air quality improvements around airports. These global standards are then translated into national requirements under domestic legislature and implemented by national transportation or environmental authorities. The first global standard applied to engines manufactured in 1986, and by 2005 NO_x standards had reduced emission rates by roughly 40% over the levels established by the first standard. In addition, in 2011 ICAO mandated (CAEP/6) additional reductions of 5% to 15% for small engines and 15% for large engines certified starting in 2014 compared to the previous standard.

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Recommendation: strengthen existing standards and develop new standards for PM emissions for international marine and aviation.

For international marine, proven technologies and fuels can reduce emissions of PM_{10}, SO_x, and NO_x by over 90% from uncontrolled levels (ICCT, 2013). More-stringent standards to drive the adoption of these technologies and fuels could reduce global international marine emissions of NO_x by 24%, and PM_{10} and SO_x by roughly 80% in 2030 from BAU levels (i.e., without further policy action).

For aviation, in 2010 ICAO established more stringent but non-binding NO_x reduction targets equivalent to a 45% reduction of CAEP/6 by 2016 and a 60% reduction by 2026. These non-binding targets should be made mandatory. Also in 2010, ICAO began the development of a non-volatile particulate matter (nvPM) standard, aimed at reducing the impacts of ultrafine particulate matter on air quality, human health, and global climate. This first nvPM standard should be adopted by 2016, in line with ICAO's expectations.

Conclusion 9: Expanded adoption of standards requiring world class vehicle emission controls and low-sulfur fuel could avoid three out of four premature deaths from exposure to air pollution emitted by vehicles in 2030.

Figure 22 illustrates the effects of two policy pathways on the number of global premature deaths caused by exposure to vehicle emissions in the year 2030. These estimates are based on exhaust emissions of $PM_{2.5}$ from light- and heavy-duty on-road vehicles in urban areas and reflect the greatest impact of vehicle emissions on public health. Additional impacts include premature deaths direct PM emissions from off-road and marine diesel emissions, and exposure to secondary PM and ozone. Also absent from these health impact estimates are non-fatal health outcomes and lost productivity as a result of direct and indirect exposure to vehicle emissions. Without additional action beyond formally adopted regulations, the number of premature deaths from direct exposure to on-road vehicle emissions could grow by two-thirds in just 16 years. The vast majority of these impacts would occur in regions such as India, China, Brazil, Mexico, and countries in Asia-Pacific, Latin America, Middle East, and Africa. Expanding the adoption of Euro 6/VI-equivalent standards would avoid on the order of several hundred thousand premature deaths incurred from exposure to vehicle pollution each year by 2030. The benefits of these regulations will be especially impactful in major high-density cities.

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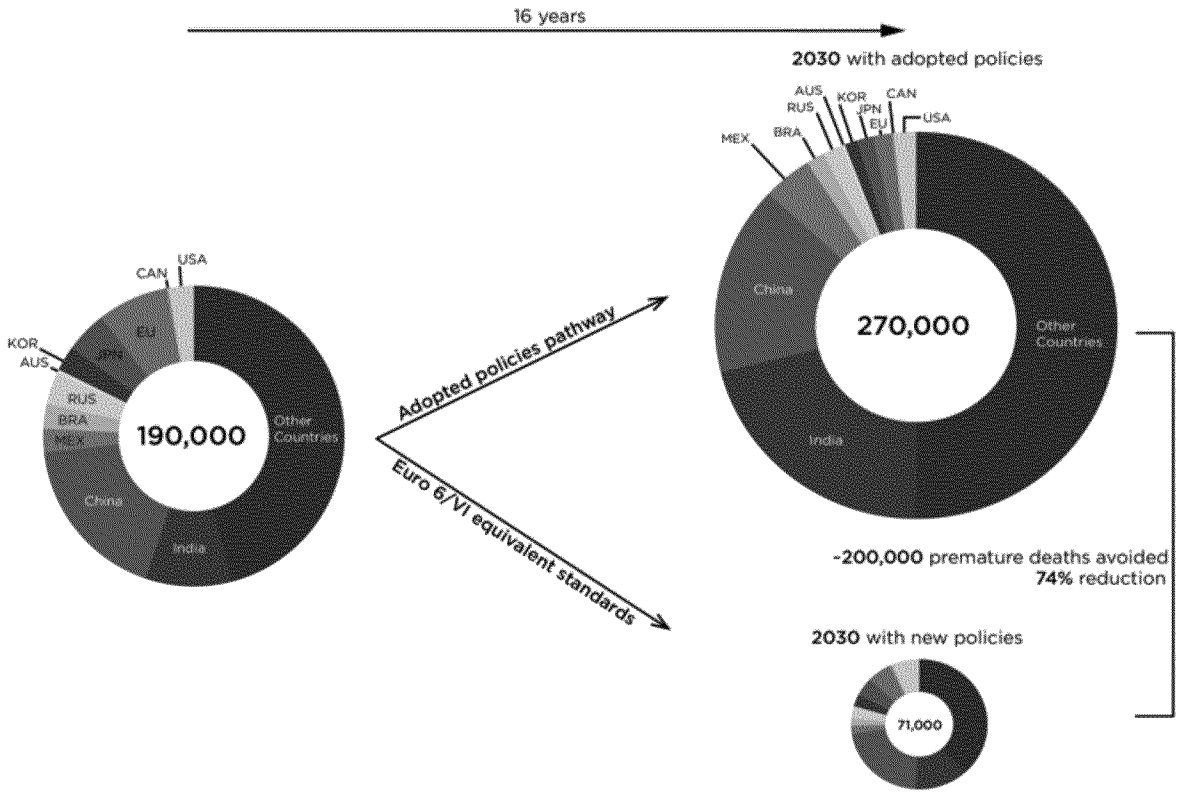


Figure 22. Global premature deaths from light- and heavy-duty vehicle exhaust $PM_{2.5}$

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LIST OF ACRONYMS

ANPR – advanced notice of proposed rulemaking
BAU – business as usual
BC – black carbon
BEV – battery electric vehicle
CAA – Clean Air Act (United States)
CAEP - Committee for Aviation Environmental Protection
CO_2 – carbon dioxide
DOC – diesel oxidation catalyst
DPF – diesel particulate filter
ECA – emission control area
EEDI – Energy Efficiency Design Index
EGR – exhaust gas recirculation
EPA – Environmental Protection Agency (United States)
ETS – Emissions trading scheme
EU – European Union
FCEV – fuel cell electric vehicle
FQD – Fuel Quality Directive
GFEI – Global Fuel Economy Initiative
GHG – greenhouse gas
$GtCO_2$ – billion metric tons of carbon dioxide
HDV – heavy-duty vehicle
ICAO – International Civil Aviation Organization
ICCT – International Council on Clean Transportation
IPCC – Intergovernmental Panel on Climate Change
IEA – International Energy Agency
IMO – International Maritime Organization
IPCC – Intergovernmental Panel on Climate Change
LCFS – Low Carbon Fuel Standard
LCV – light commercial vehicle
LDV – light-duty vehicle
LTO – landing take-off
mbd – million barrels of oil per day
MARPOL – International Convention for the Prevention of Pollution from Ships
MBM – market-based measure
MEPC – Marine Environment Protection Committee
MRV – monitoring, reporting, and verification
$MtCO_2$ – million metric tons of carbon dioxide
MY – model year
NO_x – oxides of nitrogen
OICA – International Organization of Motor Vehicle Manufacturers
PHEV – plug-in hybrid electric vehicle
PM – particulate matter

VW FOIA, EPA 06/20/2017 2017-FFP_014873

$PM_{2.5}$ – particulate matter with an aerodynamic diameter less than 2.5 micrometers
PM_{10} – particulate matter with an aerodynamic diameter less than 10 micrometers
ppm – parts per million
RED – Renewable Energy Directive
RFS – Renewable Fuel Standard
SCR – selective catalytic reduction
SEEMP – Ship Energy Efficiency Management Plan
SO_x – oxides of sulfur
SUV - sport utility vehicle
TTW – tank to wheel
TWC – three-way catalyst
ULSD – ultralow-sulfur diesel, with <15-ppm sulfur content
UNECE – United Nations Economic Commission for Europe
US – United States
WHO – World Health Organization
WTT – well to tank
WTW – well to wheel

REGION / MODE	KEY POINTS
China	Proposed LDV Phase 4, but would likely need Phase 5 (2025) standards to meet GFEI target Implemented HDV Phase 2 efficiency standards; working on next phase of HDV standards (2020 and later) Renewed and enhanced subsidies for energy-efficient passenger vehicles Adopted pathway to nationwide ULSF in 2018 Began China IV, adopted China 5 (not yet V) Vehicle sales grew 18% annually between 2005 and 2013; now the largest vehicle market Would see a significant increase in health impacts without China 6/VI standards
US	Adopted Tier 3 emission standards for LDVs, currently the most stringent worldwide Progress toward lower sulfur fuels Has adopted the longest regulatory timeline for LDV GHG standards out to 2025; 50% reduction 2005-2025, expected to achieve GFEI target 5 years early Implemented HDV GHG standards 2014-2018; began work on Phase 2 standards Successful implementation of the newest emission control area, the US Caribbean Sea ECA Retained 2016 implementation date for US ECA Revised biofuel volume requirements and established new eligible low-carbon fuel pathways in its Renewable Fuel Standard US EPA required to determine whether aircraft GHGs endanger human health and welfare
California	Proposed modifications to its Low Carbon Fuel Standard Among the highest in EV share of LDV sales (4% in 2013) ZEV mandate is perhaps the most significant electric-drive vehicle policy to date Requires in-use long-haul tractors and box-type trailers to retrofit or replace with aerodynamics, LRR tires
EU	Adopted 2020 CO_2 standards for cars and vans; would need 2025 standards to meet GFEI target Implemented Euro VI (all sales and registrations); Euro 6 to come into effect in September 2014 Mandated regulatory CO_2 reductions from HDVs could be a critical step toward similar policies in markets around the world that are following EU emission standards Proposed revisions for GHG accounting and added incentives for cellulosic biofuels in its Fuel Quality Directive, which would reduce road transport fuel carbon intensity 6% by 2020 Informally agreed to exclude international aviation from its ETS until 2017
Japan	Would need 2025 LDV standards to meet GFEI target Financial incentives for early compliance are in effect for HDV efficiency regulation
Brazil	Inovar-auto has begun implementation Would have to move relatively quickly to meet the GFEI target, likely with two phases of standards Implemented Euro 5-equivalent for LDVs Nationwide 50 ppm gasoline, 500 ppm diesel; 10 ppm diesel in metropolitan areas and select stations
India	Adopted the country's first passenger vehicle efficiency standards
Russia	No efficiency standards; would need several consecutive phases of standards to reach the GFEI target Began Euro 5 for LDVs and Euro V for HDVs (type approvals) Proposed to delay the implementation of Tier 3 NO_x standards to 2021; Tier 3 in future ECAs will be determined by the date of application approval
Canada	Could get close to the GFEI target by harmonizing with the US through 2025 Phase 1 HDV standards were adopted in March 2013 and applied starting with model year 2014 vehicles.
South Korea	Would have to move relatively quickly to meet the GFEI target, likely with two phases of standards Began Euro VI for HDVs (type approvals)
Australia	No efficiency standards; would need several consecutive phases of standards to reach the GFEI target
Mexico	Adopted country's first passenger vehicle efficiency standards through 2016 Could get close to the GFEI target by harmonizing with the US through 2025 Non-compliant with nationwide fuel sulfur regulations for gasoline and diesel
Aviation	No new regulations were proposed, adopted, or implemented in the study period New CO_2 certification requirement for new aircraft Revised “Chapter 14” noise standard for new aircraft which will take effect in 2017
Marine	EEDI entered into force in 2013, applying to all global ships over 400 gross tonnage US Caribbean Sea ECA became enforceable in January 2014 Russian proposal to delay the implementation of Tier 3 NO_x standards to 2021, IMO reached a compromise that upholds implementation in existing ECAs in 2016

To: Ex. 7 @vw.com]
From: Good, David
Sent: Fri 8/22/2014 2:28:05 PM
Subject: FW: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf [Thanks] NNTO
VWGoA-Placeholder_Info_EV-PHEV-etc-(dgood) for 2015 Printed Guide.xlsx

From: Ex. 7 @vw.com]
Sent: Monday, August 18, 2014 2:31 PM
To: Good, David
Cc: Ex. 7
Subject: RE: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Hi Dave;

Here is the Excel file you sent with all the information I can provide at this time. I don't have interior and luggage volumes to provide to you at this time, but know it is expected to be in the EPA Compact class. If you have any other questions please contact me.

Best regards,

Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, August 18, 2014 1:56 PM
To: Ex. 7
Cc: Ex. 7
Subject: RE: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Ex. 7

I didn't receive the Excel file. Attached is a generic placeholder file which you can use.

Dave

From: Ex. 7 @vw.com]
Sent: Wednesday, August 13, 2014 8:23 AM
To: Good, David
Cc: Ex. 7
Subject: 2015 Printed Fuel Economy Guide Place Holder Volkswagen e-Golf

Hi Dave;

Per the EPA August 5th guidance letter CD-14-16 we are providing information for a place holder in the printed version of the 2015 fuel economy guide for the Volkswagen "e-Golf", battery electric vehicle. This model falls in the Compact class and equipped with an 85 kW AC Permanent Magnet Synchronous Motor and Lithium-Ion battery.

If you need anything else to secure its mention in the printed guide please contact me directly.

Best regards,

Ex. 7

Ex. 7

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

Fax:

mailto:

Ex. 7

Volkswagen 2015 Placeholder Information for the EPA 2015 Printed Guide

EV

Carline Name	Veh. Class, BodyType, Pass/CargoVolume	Type of Battery	Trans Type	Motor Size Type	EnergyConsumption (KW-hr/100mi)		Driving Range
					City	Hwy	(miles)
e-Golf	Compact Car	Lithium-Ion	Auto	85 kW AC Permanent Magnet Synchronous Motor	NA	NA	NA

To: kareen.toussagnon@daimler.com[kareen.toussagnon@daimler.com]
From: Good, David
Sent: Fri 8/22/2014 2:35:44 PM
Subject: RE: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

Kareen,

Thanks for the placeholders and for checking the data in Verify for errors.

Yes you can send photos of your vehicles for the web to Bob Boundy (or to Janet Hopson) at ORNL.

Dave

From: kareen.toussagnon@daimler.com [mailto:kareen.toussagnon@daimler.com]
Sent: Wednesday, August 20, 2014 9:41 AM
To: Good, David
Subject: RE: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

Dear Dave,

Attached is an updated "Placeholder" file which lists all late MY15 introduction of our,

- EV
- PHEV
- Diesel & FFV

Please note that the file does not include any of the late MY15 conventional gasoline engine introductions.

I have also reviewed the latest "2015 FEGuide" file you have sent and it shows that we are error-free.

Another question regarding the fueleconomy.gov website, I have noticed that quite a few numbers of our vehicles do not have any photo displayed.

I thought you might be able to help or point me to the right contact person within your organization. I was given the name of Bob Boundy (ORNL). Would that be correct?

This is just a side question of absolutely no urgency … for whenever you have some time available.

Thank you and have a great day!

Mit freundlichen Grüssen / With best regards/ Salutations cordiales
E. Kareen Toussagnon
Emission and Fuel Economy Certification USA/Canada
Mercedes-Benz Cars Development
059/H105-RD/FZE
DAIMLER AG - 71032 Böblingen/Germany
Tel.: +49 - (0)7031 - 90 - 82964
e-Fax: +49 - (0) 711 - 30 - 52182964
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kareen.toussagnon@daimler.com

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HRB-Nr./Commercial Register No. 19360
Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Manfred Bischoff
Vorstand/Board of Management: Dieter Zetsche (Vorsitzender/Chairman), Wolfgang Bernhard, Christine Hohmann-Dennhardt, Wilfried Porth, Andreas Renschler, Hubertus Troska, Bodo Uebber, Thomas Weber

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, August 18, 2014 9:06 PM
To: richard.thomas@vw.com; kachuen.wong@bmwna.com; thomas.hofmann@bmwna.com; asw9@chrysler.com; j.foor@chrysler.com; Dave Barker; elarue1@ford.com; jcusuman@ford.com; deborah.a.zielesch@gm.com; laura.l.parker@gm.com; Bill Beggs; Darin_Johnson@AHM.Honda.com; peter_meier@ahm.honda.com; Tony D'Ambrosi; Christine Ueno; rseal3@jaguar.com; vvarjabe@jaguar.com; vvarjabe@jaguarlandrover.com; Toussagnon, Kareen (059); Loesch, Markus (059); Mulde, Roland (059); john.gantchar@na.mitsubishi-motors.com; david.patterson@na.mitsubishi-motors.com; KhanF@NRD.NISSAN-USA.COM; ross.gatzke@porsche.us; drobertson@mazdausa.com;

nokawa@mazdausa.com; kiriri@nano.tec.toyota.co.jp; Masahiro Konno; gbuffali@volvocars.com; plennvi@volvocars.com; snagaraj@teslamotors.com; oliver.schmidt@vw.com; james@teslamotors.com; Jackey Chen; Scott Hu; Ott, William; Pidgeon, Bill; Snyder, Jim; Ball, Joel; Dalton, Joel; Anderson, Tom; Wright, DavidA; Wehrly, Linc
Subject: Re: 2015 Printed FE Guide - Please email me your placeholder information for any HEVs, PHEVs, EVs, alt fuel & diesel vehicles which won't have FE Labels in Verify by Aug 27, 2014

To manufacturers FE Label contacts,

When you get a chance, please send me an excel spreadsheet with any placeholders for the 2015 Printed FE Guide for vehicles which will be labeled AFTER Aug 27, 2014 (and won't have FE Label data in Verify by that time).

I need any placeholders for any conventional hybrids, EVs, PHEVs, fuel cell vehicles, diesels, FFVs, CNG vehicles and alt fuel vehicles. Attached is a generic Excel spreadsheet which you can use to email your placeholder information to me.

[I don't need placeholder information for vehicles which already have 2015 FE Label information entered in Verify.]

I need your placeholders as soon as possible, no later than Tuesday, Aug 26, 2014 COB.

Note: I'll send a separate email message to each individual manufacturer with the data in Verify as of Aug 15,2014 for your review. The last page of the attached EPA guidance letter outlines the timeline for the 2015 Printed FE Guide. [Labor Day is approaching fast.]

Thanks

Dave

If you are not the addressee, please inform us immediately that you have received this e-mail by mistake, and delete it. We thank you for your support.

To: Drew Kodjak[drew@theicct.org]; Michael Walsh[mpwalsh@igc.org]
Cc: Alan Lloyd[alloyd@theicct.org]; Charles McElwee[charles.mcelwee@climateworks.org]; Charlotte Pera[Charlotte.Pera@climateworks.org]; Leonora Rojas [redacted]; ??[dingyan@vecc-mep.org.cn]; Dagang Tang[tangdagang@sohu.com]; [redacted]; Michael Wang[mqwang@anl.gov]; André Ferreira[andre@energiaeambiente.org.br]; Anumita Roychowdhury[anumita@cseindia.org]; Axel [redacted]; Catherine Witherspoon[catherine@witherspoonconsulting.com]; Hal Harvey[hal@energyinnovation.org]; He Kebin[hekb@tsinghua.edu.cn]; likunsheng[likunsheng@vip.163.com]; Margarita Parra[MParra@Hewlett.org]; Mario Molina[mmolina@centromariomolina.org]; [redacted] [redacted]Philip Owen[Philip.Owen@ec.europa.eu]; S Sundar[ssundar@teri.res.in]; Steve McCauley[steve.mccauley@ec.gc.ca]; Patty Monohan[patty@ef.org]; Adrian Fernandez[Adrian.Fernandez@climateworks.org]; ???????? ????? ????????????[donchenko@niiat.ru]; Yasuhiro Daisho[daisho@waseda.jp]; Yuefu Jin[jinyuefu@sina.com]; Ian Hodgson[Ian.HODGSON@ec.europa.eu]; Grundler, Christopher[grundler.christopher@epa.gov]; rodolfo.lacy@semarnat.gob.mx[rodolfo.lacy@semarnat.gob.mx]; Krishan Dhawan[krishan@shaktifoundation.in]; Youngil Jeong[yjeong@kimm.re.kr]; Cristiano Façanha[cristiano@theicct.org]; fanta@theicct.org[fanta@theicct.org]; Nic Lutsey[nic@theicct.org]; kate@theicct.org[kate@theicct.org]
From: Dan Greenbaum
Sent: Fri 8/22/2014 3:58:38 PM
Subject: RE: For Review: ICCT Report - State of Clean Transportation Policy

Drew – FYI this is not how I would have responded – he could also have been copied as our ongoing Board advisor… But I can follow up with that…

From: Drew Kodjak [mailto:drew@theicct.org]
Sent: Friday, August 22, 2014 10:45 AM
To: Michael Walsh
Cc: Alan Lloyd; Charles McElwee; Charlotte Pera; Dan Greenbaum; Leonora Rojas Bracho; 丁焰; Dagang Tang; Margo Oge; Michael Wang; André Ferreira; Anumita Roychowdhury; Axel Freidrich; Catherine Witherspoon; Hal Harvey; He Kebin; likunsheng; Margarita Parra; Mario Molina; [redacted] Philip Owen; S Sundar; Steve McCauley; Patty Monohan; Adrian Fernandez; Донченко Вадим Валерианович; Yasuhiro Daisho; Yuefu Jin; Ian Hodgson; Director Christopher Grundler; rodolfo.lacy@semarnat.gob.mx; Krishan Dhawan; Youngil Jeong; Cristiano Façanha; Fanta Kamakate; Nic Lutsey; Kate Blumberg
Subject: Re: For Review: ICCT Report - State of Clean Transportation Policy

Dear Michael,

Thanks for the clarification and please accept my apologies.

Drew

On Aug 22, 2014, at 12:13 AM, Michael Walsh <mpwalsh@igc.org> wrote:

Dear Friends,

This is a mistake as I am not a member of the ICCT Council.

Michael

Michael P. Walsh

WalshCarLines

On Aug 21, 2014, at 22:45, Drew Kodjak <drew@theicct.org> wrote:

> Dear ICCT Council Members:
>
> The International Council on Clean Transportation (ICCT) invites you to provide comments on the final draft of our upcoming report on the *State of Clean Transport Policy*. This milestone document summarizes recent regulatory developments for clean vehicles and fuels in eleven major vehicle markets, quantifies the impacts of recently adopted policies on climate, energy, and health, and evaluates the benefits of strengthening and expanding international best practices worldwide.
>
> The ICCT is engaging our Council Members to provide comments on the accuracy of regulatory updates, whether results in charts and tables can be displayed in a better or more compelling way, and the relevance of conclusions and recommendations to your current in-country regulatory efforts. We are also interested in your feedback on how to conduct a successful outreach process, and to identify key venues where conclusions would be

especially relevant.

We will acknowledge all reviewers who provide comments on the draft report as follows: "The authors would like to thank the ICCT Council Members who have generously contributed their time and insight in reviewing and commenting on the draft version of this report. We particularly thank …". We ask you to refrain from distributing or citing this draft, since we may refine the report in response to your comments. Our tentative official release is targeted for the month of October; we will share the final report one week ahead of the public release.

The deadline to receive comments is Friday, September 5 which allows more than two weeks for review. In order to facilitate your review, we've created a summary table of key elements for each region. The quickest way to review the key elements of this report is to review the attached table, find your respective country or region, and check the underlying assumptions to ensure accuracy. If you are interested and able to comment, please respond to me and Cristiano Façanha (cristiano@theicct.org) by email at your earliest convenience.

With warm regards,

Drew

<State of Transport Policy - Final Draft.pdf>

<Key points SCTP.docx>

Ex. 6

Ex. 7

Philip Owen[Philip.Owen@ec.europa.eu]; S Sundar[ssundar@teri.res.in]; Steve McCauley[steve.mccauley@ec.gc.ca]; Patty Monohan[patty@ef.org]; Adrian Fernandez[Adrian.Fernandez@climateworks.org]; ???????? ????? ????????????[donchenko@niiat.ru]; Yasuhiro Daisho[daisho@waseda.jp]; Yuefu Jin[jinyuefu@sina.com]; Ian Hodgson[Ian.HODGSON@ec.europa.eu]; Grundler, Christopher[grundler.christopher@epa.gov]; rodolfo.lacy@semarnat.gob.mx[rodolfo.lacy@semarnat.gob.mx]; Krishan Dhawan[krishan@shaktifoundation.in]; Youngil Jeong[yjeong@kimm.re.kr]; Cristiano Façanha[cristiano@theicct.org]; fanta@theicct.org[fanta@theicct.org]; Nic Lutsey[nic@theicct.org]; kate@theicct.org[kate@theicct.org]
From: Dan Greenbaum
Sent: Fri 8/22/2014 4:01:16 PM
Subject: Recall: For Review: ICCT Report - State of Clean Transportation Policy

****

To: Harry.Thompson@dot.gov[Harry.Thompson@dot.gov]
From: Good, David
Sent: Fri 8/22/2014 9:43:25 PM
Subject: FW: Status of 2013 CAFE/GHG letters
2013 CAFE Status.814.xlsx

Harry,

FYI

Dave

From: Good, David
Sent: Friday, August 22, 2014 5:42 PM
To: Zaremski, Sara
Cc: Wehrly, Linc; Peavyhouse, Robert; French, Roberts; Bunker, Byron
Subject: Status of 2013 CAFE/GHG letters

Sara,

I made more progress on the 2013 CAFE/GHG letters. They are all finished except for the following:

Mfr	Comment
Mercedes	Mercedes will try to send us their CAFE/GHG model year report letter by 9/1/2014; Verify is close; Bob needs to do their GHG calculations outside of Verify (with two Verify CAFE letters and two separate GHG letters outside of Verify).
Fiat	Pending Chrysler/Maserati GHG aggregation issue - Waiting until Byron & staff meet with Chrysler attorneys

Ford Delayed by the latest C-Max/Fusion/MKZ issue; Ford will try to finish up by 9/1/2014

Hyundai/Kia Pending OECA road-load settlement (same as 2011 CAFE & 2012 CAFE/GHG Hyundai/Kia letters)

Harry Thompson said that this week, NHTSA was in the process of sending out 5 letters (or so) to mfrs requesting payment of CAFE penalties.

Highlights:

•□□□□□□□ Four GM models and one Honda model used R1234YF---2013 Cadillac XTS, XTS AWD, XTS Limo, XTS Hearse (42,724 sales) and the Honda Fit EVs (471 sales);

•□□□□□□□ GM sold 27,484 2013 Volts;

•□□□□□□□ Honda sold 471 Fit EVs;

•□□□□□□□ Nissan sold 26,267 2013 Leafs;

•□□□□□□□ Toyota sold 10,300 Prius PHEVs, 737 RAV4 EVs & 92 Scion iQ EVs;

•□□□□□□□ All mfrs used CREE, except Nissan, Subaru & Mazda used Opt-CREE.

Next week, I need to work on the 2015 FE Printed Guide---helping mfrs correct errors & shipping the data & placeholders to DOE by Thurs (8/28/14). After that, I'll finish up the remaining CAFE/GHG reports (including the 2012 Porsche/VW letters).

Dave

From: Good, David

Sent: Friday, August 15, 2014 6:34 PM
To: Zaremski, Sara
Cc: Wehrly, Linc; Peavyhouse, Robert; French, Roberts
Subject: RE: 2013 CAFE/GHG letters

Sara,

I'm made some progress this week on the CAFE/GHG letters—except Japan was on vacation for the week (the whole country). I'm waiting for some corrections from Toyota, Honda & Subaru. See the attached spreadsheet.

The ones with light blue fill in the "production volume" column have been done. Please ignore the mpg values, comments etc for the others---as those are the values for 2012MY. [I like to compare the 2013 values to the 2012 values as I fill in the spreadsheet.]

Honda, BYD, Toyota Trucks are ready to go, as soon as the mfrs send me some relatively minor corrections.

Highlights: Four GM models and one Honda model used R1234YF---2013 Cadillac XTS, XTS AWD, XTS Limo, XTS Hearse (42,724 sales) and the Honda Fit EV. GM sold 27,484 2013 Volts. Nissan sold 26,267 2013 Leafs.

The following will likely miss the 8/25/2014 deadline:

Mfr	Comment
Mercedes	Mercedes will try to send us their CAFE/GHG model year report letter by 9/1/2014; Verify is close; Bob needs to do their GHG calculations outside of Verify by hand (with two Verify letters and two separate GHG letters outside of Verify).

Fiat Pending Chrysler/Maserati GHG aggregation issue - Waiting until Byron & staff meet with Chrysler attorneys

Ford Delayed by the latest C-Max/Fusion/MKZ issue; Ford will try to finish up by 8/25/2014

Hyundai/Kia pending OECA road-load settlement (same as 2011 CAFE & 2012 CAFE/GHG letters)

I hope to have all the others and possibly Ford completed by next Friday.

Dave

From: Good, David
Sent: Friday, August 08, 2014 5:23 PM
To: Zaremski, Sara
Cc: Wehrly, Linc
Subject: 2013 CAFE/GHG letters

Sara,

I'm making good progress on the CAFE/GHG letters. See the attached spreadsheet.

The ones with light blue fill in the "production volume" column have been done. Please ignore the mpg values, comments etc for the others---as those are the values for 2012MY. [I like to compare the 2013 values to the 2012 values as I fill in the spreadsheet.]

Honda is ready to go, as soon as they send me the in-use CREE standards. GM is next.

Highlights: So far only one model has R1234YF---the 2013 Honda Fit EV. Nissan sold 26,267 Leafs.

Dave